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THE LONDON NATURALIST



The Journal of the
LONDON NATURAL HISTORY SOCIETY

FOR THE YEAR
1927

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1928



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A GATHERING OF PIERIDAE AND PAPILIONIDAE ON DAMP SAND

Matto Grosso, Brazil. August 23rd, 1927

These gatherings include a number of species, and are composed almost entirely of males
Photographed by C. L. Collenette, F.E.S.

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EDITORIAL NOTES

THE distinction conferred on the Society by Viscount Grey of Fallodon, K.G., P.C., in accepting the Council's invitation to become our first Honorary President, is highly appreciated by the members, and the Council is to be congratulated on the choice of an Honorary President so eminent and so fully in sympathy with the aims of the Society.

The Year's Work

Among the activities of the Society during the past year, of which a record is found in these pages, the papers read at the meetings have been of a very high standard and extremely interesting, but as a good deal of the subject matter has already been published elsewhere, none of these papers has been selected for inclusion in this volume. We take this opportunity, however, to express our appreciation of them and our indebtedness to the authors, and especially to the following gentlemen who, though not members of the Society, kindly came to lecture to us:—Sir Frank Baines, Major E. E. Austen, Dr. N. H. Joy, and Messrs. Paulson, Roland Green, F. Martin Duncan, A. B. Jackson and T. H. L. Grosvenor. Mr. A. B. Jackson's paper contained a key to the species of elm found in Britain. An extract has been made of this and, with the author's kind consent, we print it on p. 28.

Exhibitions

In spite of unfavourable weather the Spring Exhibition was a much greater success than it had been for a long time. It was attended by 129 members and visitors. A larger hall was secured for the short illustrated lectures. This enabled the exhibits to be displayed much more suitably on tables in the two rooms used by the Society on ordinary occasions. Chief place must be given to an extensive and valuable collection of curios and implements of archaeological and ethnological interest from the Pacific Islands obtained by Miss Longfield and Mr. C. L. Collenette when working with the "St. George" Expedition.

The display staged by the Ornithological Section also attracted much attention. The other sections were well represented, and in most cases their allotted table space was none too large.

In September the session opened with an exhibition instead of the usual paper. The Plant Galls Section displayed a number of specimens, two of which were thought to be additions to the British list, and Mr. R. W. Robbins exhibited a number of species of brambles freshly cut. The lepidopterists showed some of their recent captures and bred specimens and also a few living larvae. Owing mainly to

wet weather, however, the number of living specimens of insects and plants was not so large as had been anticipated.

A Member Honoured

We offer sincere congratulations to Dr. Major Greenwood upon the award of the Buchanan Medal by the Royal Society, for his work on public health.

Publications by Members

Early in the year an important book on "Dogs, their History and Development" was published by Benn Bros., Ltd. The author is Mr. E. C. Ash. This work, in two handsome volumes, deals attractively and exhaustively with the subject, and must have entailed a vast amount of labour and research. The text is supplemented with nearly 700 illustrations, many of them remarkable and curious.

In the autumn a small volume by Mr. C. S. Bayne, with the title "Birds in the Bush," was published by the Royal Society for the Protection of Birds. It is intended for beginners and is divided into three sections, namely, "How to Recognise Wild Birds," "The Interest of Bird Life," and "The Protection of Birds."

The valuable series of articles on the birds of the Essex rivers by Mr. W. E. Glegg, has been continued in the "Essex Naturalist."

In the April number of "English Life" Mr. Max A. Wright had an interesting article on "Birds of the London Reservoirs." It was illustrated with photographs by another member, Miss M. G. L. Best.

Bird Pictures

Mr. Roland Green, who was elected a member of the Society during the year, held an exhibition in December of his pictures of bird life. Those who visited the gallery had a delightful experience, and we are glad to report that the exhibition was a great success.

The Library

The librarians have devoted many evenings to the preparation of a new catalogue of the library. In due course this will be issued to members. Meanwhile the librarians ask us to mention that members may borrow books from the collection.

Among the many valuable volumes on the shelves are the magazines and reports of several kindred societies. On behalf of the librarians and the Society as a whole, we thank those societies for their kindness in thus enriching our collection during the year and in the past.

A Supplement

A start is made in this issue by the Botanical Section in the publication of records that have accumulated since the compilation was begun in 1900 by the late Mr. C. S. Nicholson. It is printed as a supplement, and is separately paged in an eight page section so that in time it may be removed and bound with similar sections which we hope to publish in future volumes of the "London Naturalist," and thus form a complete guide to the flowering plants of the Society's district round London.

LONDON RESERVOIRS AND THEIR INFLUENCE ON BIRD LIFE

By A. HOLTE MACPHERSON

WE Londoners often deplore the interminable extension of the town, with the consequent destruction of fields, trees and hedges, and the disappearance of most of the birds which frequented them. We sometimes fail to realise that it is this growth of the town which has resulted in the London district becoming one of the best in England for watching many species which frequent water.

A map made at the beginning of the nineteenth century covering the area within twenty miles of St. Paul's, would show a district containing but little water apart from the Thames and its tributaries. On a recent map of the same area we see various stretches of water, some of considerable size, covering in all several thousand acres. This difference in the two maps is due to the reservoirs which have been made to meet the increasing needs of the population. In view of the amount of time now devoted by many persons to the observation of birds near London, it may be worth while to say something of the history of the more important of these waters, and of their effect on the bird life of the district.

The reservoirs of Ruislip and Kingsbury, both in Middlesex, were made for the purpose of feeding the Regent's Canal; that at Elstree, in Hertfordshire, to serve the Grand Junction Canal; and the remainder were constructed to provide the general water supply required by the growing population of the Metropolitan area.

The Elstree and Ruislip reservoirs were made early in the last century, and therefore were among the first lakes to appear in our district. They have been visited by some rare and interesting birds; Elstree has had its Little Bittern *Ixobrychus m. minutus* (L.), and Ruislip is, perhaps, best known as a haunt of the Great Crested Grebe, *Podiceps c. cristatus* (L.). But they do not lie in river valleys, and do not appear to have had great attention paid to them by naturalists. Neither of them has contributed very much to the ornithological history of the London district.

The same cannot be said with regard to the Kingsbury, or, as it is now more commonly called, the Brent reservoir, which was completed on the 24th of November, 1835.¹ It was made by damming the little river Brent at a point about eight miles north-west of St. Paul's. From an engineer's point of view the construction of this lake was a comparatively small operation, but its ornithological results

¹ A small extension of the reservoir was completed on 15th December, 1837.

were immense. The appearance of a large stretch of water in the Brent valley, only six miles from the Thames, soon attracted birds: and, unlike other important reservoirs to which we shall refer, this one was under the eyes of a keen naturalist from the moment it was made. For at the time it was constructed Frederick Bond, one of the founders of "The Zoologist" and for twelve years one of the editors of "The Entomologist," an ardent collector of birds and insects, happened to be living at Kingsbury. He resided there from 1828 to 1853: and then, after seven years in London, the old attractions of Kingsbury became irresistible, so he returned and lived there again.² Mr. J. E. Harting, an equally noted naturalist, thirty years Bond's junior, was for fifteen years his neighbour at Kingsbury; and, like Bond, obtained many rare birds there. Two other well-known ornithologists and collectors, Mr. W. H. Power and his brother Mr. F. D. Power, also made this spot their hunting ground. Under such circumstances it is improbable that many rare visitors passed unnoticed.

It was in 1843, when the reservoir had been made only about eight years, that Bond's paper, giving a list of the rare birds which had already occurred there, appeared in the first volume of "The Zoologist."³ As a record of occurrences at a small newly-made lake in an inland county, this list is amazing. Mr. Harting's "Birds of Middlesex," which was written at Kingsbury, was published in 1866. No reader of this excellent little book can help being struck by its constant references to the reservoir, and by the remarkable number of uncommon species which are recorded from that spot. Among these are Little Ringed Plover, *Charadrius dubius curonicus*, Gm., Squacco Heron, *Ardeola ralloides* (Scop.), Spoonbill, *Platalea l. leucorodia*, L., Little Bittern, Night Heron, *Nycticorax n. nycticorax* (L.) Avocet, *Recurvirostra avosetta* (L.), Wood Sandpiper, *Tringa glareola*, L., Ruff, *Philomachus pugnax* (L.), Spotted Redshank, *Tringa erythropus* (Pall.), Black-tailed Godwit, *Limosa l. limosa* (L.), Temminck's Stint, *Erolia temminckii* (Leisl.), Buonaparte's Sandpiper, *Erolia fuscicollis* (Vieill.), Brent Goose, *Branta b. bernicla* (L.), Ferruginous Duck, *Nyroca n. nyroca* (Güld.), Black-throated Diver, *Colymbus a. arcticus*, L., and Pomatorhine Skua, *Stercorarius pomarinus* (Temm.). Not only were all these birds reported from the reservoir, but most of them from no other spot in the county. One wonders, after reading "The Birds of Middlesex," whether it would have been written if the Brent stream had not been dammed.

In those days, Kingsbury, at the south end of the reservoir, and Hendon, to the north-west, were small places. Mr. Harting says:—⁴

² But Bond did not end his days at Kingsbury. He died and was buried in 1889 at Staines, some years before its famous reservoirs were made. We have more than once combined an afternoon at these reservoirs with a visit to Bond's grave, which is in St. Mary's Churchyard, close to the Station of the Great Western Railway.

³ "The Zoologist," 1843, p. 102.

⁴ "The Zoologist," 1889, p. 409. [Since this article was written Mr. Harting died, on the 16th of January, 1928, at Barnes.]

"The water was very little disturbed then by human visitors, and we have many a time walked round it, about two miles, and followed the Brent towards Hendon, or in the other direction towards Brentford, without meeting anyone but farm-labourers, or perhaps one or two anglers." The scene is very different now; for buildings are rapidly closing in round the water, the recently constructed North Circular Road runs near its eastern bank, and for some time past the place has no doubt been growing less and less attractive to birds. Nevertheless it is probable that uncommon species still occur there, and it is a pity that it is not more frequently visited by members of the ever increasing army of bird-watchers.

It must be borne in mind that the reservoir in the Brent valley has natural sides, while those under the control of the Metropolitan Water Board are enclosed by walls of brick or concrete; and, being without muddy banks, are not very suitable for limicoline birds. Such waders as visit the latter have little inducement to stay for any length of time. This is a source of regret, particularly in the case of reservoirs situated close to the Thames, for it has long been recognised that the Thames valley is a route used regularly by birds of this Order on their spring and autumn movements. This fact has been forcibly demonstrated during the last few years, not only by the records of species observed at the Reading sewage farm, but also quite recently by the number of waders, referred to elsewhere in this Journal, which were seen at Staines on the south reservoir during the five months from May to October, 1927, during which it was drained.

Turning from the Brent to the other side of London, we find two reservoirs by Lordship Road, Stoke Newington, which were made in 1855. They are within four miles of St. Paul's, and sprang into fame in 1912 as a nesting place of the Great Crested Grebe. The Tufted Duck, *Nyroca fuligula* (L.), has also quite recently bred here.

A little further to the east, we come to a group of reservoirs stretching up the valley of the Lea, most of them near Walthamstow. Omitting the one named after King George, which was opened in 1915, and lies some miles further up the valley to the north, they are twelve in number and cover several hundred acres. A good view of some of them can be obtained from the public footway. From these Walthamstow Reservoirs, which lie for the most part within the borders of Essex and in some cases possess well wooded little islands, many interesting events have been recorded, such as the establishment of a heronry, the nesting of the Tufted Duck and Great Crested Grebe,⁵ and occurrences of the Red-necked Grebe, *Podiceps g. griseigena* (Bodd.), Red-throated Diver, *Colymbus stellatus*, Pontopp., and Red-crested Pochard, *Netta rufina* (Pall.). But most of these interesting records are quite recent, and are chiefly due to the vigilance of Mr. W. E. Glegg and other members of our Society. Mr. H. Chipperfield

⁵ The nest of the Tufted Duck was discovered here 14 years ago by Mr. W. E. Glegg ("British Birds," vol. vii., p. 56): the nest of the Great Crested Grebe was seen here 18 years ago by Mr. Miller Christy ("British Birds," vol. vii. p. 91).

referred to these reservoirs in 1890, in an article on the "Birds of North East London," which appeared in "Nature Notes"; but there appears to be no mention of them in Mr. Miller Christy's "Birds of Essex," although eight out of the twelve were constructed long before 1890, when that book was published:⁶ nor are they alluded to in that writer's article on birds in the Victoria History of the County of Essex, published thirteen years later. In the earlier years of their existence, these reservoirs seem to have been almost unknown to naturalists.

Though far less in extent than the reservoirs at Walthamstow, those at Barn Elms near Hammersmith Bridge are more conveniently placed for birds passing along the Thames valley, for they lie close to the Surrey bank of the river. The late Sir John A. Bucknill makes only one or two slight references to them in his "Birds of Surrey"; but this is not surprising, for they were completed only three or four years before his book was published in 1900, and there is no public footway from which a view of the water can be obtained. He states that a single Great Crested Grebe was seen in the spring of 1899 on the "Putney reservoir." This is clearly an allusion to one of the waters in question, which in fact lie within the boundaries of Barnes. It was not until 1909 that they came into prominence, when Mr. William A. Todd called attention to them.⁷ He wrote of the Great Crested Grebe that as many as sixteen to eighteen might be seen on the reservoirs during the winter. At the present time these reservoirs are frequented by this species throughout the year, and from sixty to eighty have often been counted in the autumn and early winter. It was here, a few years ago, that a very great rarity, an almost entirely white Great Crested Grebe, stayed for several weeks. Nobody who saw it will ever forget that wonderful bird. It appeared to be made of silver. It was from these reservoirs that Mr. J. Rudge Harding in 1922 reported the presence of Smew, *Mergus albellus* (L.), since when the place has become perhaps the most popular winter resort of that species in England. Here the Red-necked Grebe, Slavonian Grebe, *Podiceps auritus* (L.), and Black-necked Grebe, *Podiceps n. nigricollis*, C. L. Brehm, have shown themselves; and the Sandwich Tern, *Sterna s. sandvicensis*, Lath., Velvet Scoter, *Melanitta f. fusca* (L.),⁸ and Garganey, *Querquedula querquedula*, L. By these reservoirs the

⁶ The four exceptions are the reservoirs known as "Warwick East" and "Warwick West," which were constructed under powers conferred by an Act of 1895, and those known as the "Bunbury" and "Lockwood," made under an Act of 1897. The eighth which existed prior to the appearance of "The Birds of Essex," are those numbered 1, 2, 3, 4 and 5, made under powers given by an Act of 1853; and those known as "High Maynard," "Low Maynard" and the "Racecourse," made under an Act of 1867. The "Racecourse" was subsequently enlarged to its present size under the Act of 1895 above referred to.

⁷ "The Selborne Magazine," 1909, p. 214: see also notes by the same writer in "The Zoologist," 1909, p. 231.

⁸ A young Velvet Scoter was identified here by Mr. D. Gunn on 3rd December, 1927. This species is not included in Bucknill's "Birds of Surrey."

Tufted Duck and Pochard, *Nyroca f. ferina* (L.), have nested. The White Wagtail, *Motacilla a. alba*, L., has been seen on their banks, and the Black Redstart, *Phoenicurus ochrurus gibraltariensis* (Gmelin), has been reported from the adjoining allotment gardens.⁹ A long list could be made of the birds observed at the Barn Elms reservoirs, which are less than seven miles from St. Paul's. They are popular with the Black-headed Gull, *Larus r. ridibundus*, L., as a place in which to spend the night. It was in the early nineties that these birds began to show an inclination to pass the winter months in town. At first, they were not very numerous, and flew away every evening towards the mouth of the Thames. For the next few years many of them went at sunset to Chiswick Eyot, or to the two narrow reservoirs opposite, which lie between Lonsdale Road and the River. But from 1896, when the Barn Elms reservoirs had been made, they could be seen flying to them every evening. Black-headed Gulls have now become so numerous that at night they resort to all the Metropolitan reservoirs up the Thames valley in autumn and winter, and some immature birds can be seen there in yearly increasing numbers throughout the spring and summer. It may be due to the example of this species that visits from other kinds of gull have become more frequent.

For an aquatic bird flying up the Thames, the next good resting place after leaving Barnes is Molesey, where there is a group of reservoirs largely frequented by wild fowl in winter. It is not possible within the limits of this paper to do more than mention these reservoirs which cannot be seen by the public; but those at Staines in Middlesex, just within our radius of 20 miles, are of particular interest. They have not been in existence much more than twenty years, lie a little over a mile from the Thames, and a view of their two large sheets of water can be obtained by anybody who uses the footpath running along the causeway or bank which separates them.

The species which comes first to mind when considering bird life in connection with any of the reservoirs about London is undoubtedly the Great Crested Grebe, and the great increase in its numbers which has taken place is nowhere more strongly reflected than at Staines, so we may be excused for referring to it once more. In 1866 Mr. Harting wrote¹⁰ "I cannot learn that this handsome bird has ever been seen in Middlesex in the peculiar stage of plumage from which it derives its name; the few examples which have occurred have all been in winter or immature plumage, minus the crest." He gives only five cases of the occurrence of the Great Crested Grebe in the county. Fortunately, soon after the reservoirs at Staines were

⁹ It will be remembered that Bond was responsible for the addition of both the White Wagtail and the Black Redstart to the British List, and in each case through specimens obtained within our radius of St. Paul's: the White Wagtail through examples obtained by him by the Brent reservoir in 1843, and the Black Redstart through a specimen which he shot in Kilburn in 1829.

¹⁰ "Birds of Middlesex," p. 241.

opened, Mr. Graham W. Kerr wrote two valuable articles on "The Birds of the District of Staines."¹¹ In the first of these Mr. Kerr says, "The building of these reservoirs has had great effect on our bird-life, attracting many species formerly unknown to these parts." Referring to the Great Crested Grebe, he writes, "on the reservoir the bird is unusually plentiful, and it is only for about three months (June, July and August) of the year that it is entirely absent from these waters. I have counted as many as eighty birds in sight at the same time, and that I fancy must be going on for an English record." We now see this bird here in every month of the year. Moreover, we have seen it in apparently full breeding plumage in every month of the year; while those of us who have counted two hundred at a time, smile at the idea of eighty being a record. Far from being entirely absent in August, in some years at Staines they are more plentiful in that month than in any other; and it is a curious fact that they always appear in their greatest numbers at Staines a month or two earlier than at Barnes. No doubt these quiet spacious waters provide an ideal place for moulting, which, so far as the body feathers are concerned, is a lengthy process in this species. Great Crested Grebes do not breed at Staines, nor do they at Barnes; there is no anchorage for a nest at these places.

It may be of interest to look back twenty years and compare the present position of some other birds with that which then prevailed. When Mr. Kerr wrote in 1906, the only ducks which he recorded from the reservoirs were Mallard, *Anas p. platyrhynchos* L., Teal, *Querquedula c. crecca* (L.), Wigeon, *Mareca penelope* (L.), and Tufted. To these he added in 1908 Sheld-Duck, *Tadorna tadorna* (L.), and Golden-eye, *Glaucionetta c. clangula* (L.). He made no reference to Gadwall *Anas strepera*, L., Shoveler, *Spatula clypeata* (L.), Pintail, *Dajila a. acuta* (L.), Pochard,¹² Scaup, *Nyroca m. marila* (L.), Common Scoter, *Melanitta n. nigra* (L.), Velvet Scoter,¹³ Snew, Goosander, *Mergus m. merganser*, L., or Red Breasted Merganser, *Mergus serrator*, L., all of which have been noted by later observers; some being now regular visitors. Of the grebes, Mr. Kerr only mentions the Great Crested and Black-necked; all five British species have occurred here in the last few years.¹⁴ He mentions the Great Northern Diver *Colymbus immer* Brünn; which species,

¹¹ These articles appeared in "The Zoologist," 1906, pp. 179, 230, 307 and 386, and 1908, p. 137.

¹² It is probable that Mr. Kerr was unlucky in not having observed the Pochard on the reservoirs, for at the time he wrote, in 1908, it was established as a nesting species a few miles away in Windsor Park, as he himself has recorded.

¹³ We believe that this Velvet Scoter, which was seen in December, 1927, by those indefatigable observers, Mr. J. W. Castle and Mr. D. Gunn, is the only known occurrence of the species in Middlesex. It rarely occurs in inland counties. Possibly it was the same bird that Mr. Gunn had seen at Barn Elms a few days before.

¹⁴ Neither the Slavonian nor the Red-necked Grebe was known to have occurred in Middlesex when "The Birds of Middlesex" was published.

and the Black-throated Diver, were both identified here in 1927.¹⁵ There can be no doubt that, as the place has become better known among birds, more have resorted to it. At present it is too early to say to what extent the recent opening of a large new reservoir covering 700 acres at Littleton, only three miles away, will affect the birds at Staines.

It is only natural that the chief objects of interest to watchers at all the reservoirs are the grebes, ducks and gulls; and, when they are present, terns and waders. The passerine birds to be seen on the banks hardly receive the attention they deserve. It should not be forgotten that the Aquatic Warbler, *Acrocephalus paludicola* (Vieill.), was unknown as a Middlesex bird until it was reported from the Staines causeway by Mr. Gunn.

For water-fowl in winter no bird sanctuaries could be more effective than these reservoirs of the Metropolitan Water Board. London is probably the only large town in the land where a busy man can escape from his office on a Saturday afternoon in autumn or winter, sure of seeing Great Crested Grebe and at least five or six species of duck in a wild state before daylight fades. And, so far as water-birds are concerned, he always leaves his desk supported by that most buoyant of all sensations, the feeling that "almost anything may turn up."

Endless problems present themselves while we gaze at the vast bird population of these reservoirs: questions connected with the dates on which the various species arrive and depart, the places from which the birds come and to which they go, their numbers, the preference of certain birds for certain reservoirs, the food which attracts them. Perhaps we spend most time in wondering where all the birds would be, if these great sanctuaries had never been made. But this is not the place to consider such matters.

It is obvious that the influence of the reservoirs on birds in the London district has been immense. We can only estimate the extent of their influence by trying to imagine the bird life of the district without them.

¹⁵ The former in November by Mr. D. Gunn, Mr. J. W. Castle and Mr. F. R. Finch, and the latter in December by Mr. D. Gunn and Mr. J. W. Castle. This is apparently the only Black-throated Diver known to have occurred in Middlesex apart from the one shot by Bond on the Brent reservoir in the winter of 1843, and a specimen said to have been obtained at Fulham. This last bird was presented in 1841, by W. J. Broderip, F.R.S. (the writer of the historical introduction to Owen's monograph on the Dodo), to the British Museum, where it can now be seen in the Bird Gallery. This specimen was evidently unknown to Mr. Harting in 1866, for it is not referred to in "The Birds of Middlesex."

BRAMBLES OF KENT AND SURREY (1)

By WILLIAM WATSON

IN the following notes it is my purpose to run through the brambles that I have gathered in Kent and Surrey, or that others have gathered and I have examined, and to offer remarks wherever there seems something to be said.

The localities most visited by me lie chiefly within 15 miles of London, and I have only occasionally explored the outlying localities mentioned. Many of the brambles met with I have grown for several years from seed or rooted shoot-tips, under various conditions as to shade and soil.

Both counties, and especially Kent, prove to be exceedingly rich in species, and to contain more northern and Atlantic species than seemed likely.

Rubus idaeus, Linn.

R. idaeus f. *obtusifolius*, Willd. Barnet Wood, Hayes (v.c. 16). Is obtained sometimes when two garden raspberries are crossed together. A. Ley records it from a garden in Herefordshire.

R. fissus, Lindl. Chislehurst Common, St. Paul's Cray Common, and Pett's Wood, Chislehurst (v.c. 16). Near Charles Hill, Tilford (v.c. 17), collected by E. S. Marshall. Often with double flowers.

R. nessensis, Hall. Pett's Wood, Chislehurst; Hayes Common (in two localities); Barnet Wood, Hayes (in two localities); Holwood; all in v.c. 16. Also at Bigbury, near Canterbury (v.c. 15).

Rogers prefers to call this "*R. suberectus*, And.", a much later name for the same bramble, on the ground that Hall's description includes *fissus*, in that "petioles channelled" is a character of *fissus* and not of the present plant. I find that the petioles of "*suberectus*," however, are channelled, though not so distinctly as in *fissus*. On the other hand, what Hall says besides about his plant cannot possibly apply to *fissus*. "Foliis . . . nudis, caule subinermi . . . Fruit with a peculiar taste . . . stands between *idaeus* and *fruticosus*." All this plainly applies to "*suberectus*." Halacsy, Druce and Keller use Hall's name in preference to Anderson's.

R. rogersii, Linton. Farnborough Common; Keston Common; Hayes Common; Barnet Wood, Hayes; not St. Paul's Cray Common (see Marshall's query in "Flora of Kent"). All in v.c. 16. Our plant is always much smaller than the Scottish plant.

R. sulcatus, Vest. Near Selling (v.c. 15).

R. plicatus, N. & W. Most authors quote the authority for the species as Weihe & Nees. Weihe and Nees themselves, however, quote the plant as *R. plicatus*, N. & W., and so with all their brambles. Sheen Common, Walton Common, Chobham Ridges, collected by C. E. Britton; Barnes Common; Abrook Common; all in v.c. 17.

St. Paul's Cray Common; Pett's Wood, Chislehurst; all in v.c. 16. Flowers up to 2.5 cm. on Chislehurst Common.

R. plicatus subsp. *amblyphyllus*, Boul. Chislehurst Common (v.c. 16). Roehampton (v.c. 17).

R. opacus, Focke. Abrook Common (v.c. 17), with rose flowers.

R. nitidus, N. & W. Formerly a single bush on Hayes Common (v.c. 16) after a fire; now overgrown with gorse and not to be found. Thursley, collected by C. E. Britton; Milford, collected by W. M. Rogers; Royal Common; Mare Hill, Witley; near Tilford, collected by E. S. Marshall; all in v.c. 17.

R. affinis, N. & W. Barnes Common and Wimbledon Common; near Witley, collected by E. S. Marshall; all in v.c. 17. Bostall Heath (v.c. 16).

R. holerythros, Focke. An Atlantic species. Chislehurst Common; Hayes Common; Keston Common; all in v.c. 16. Chobham Common; Sandhills, Witley; Stanford, Bisley, Netley Heath and White-moor Common, collected by C. E. Britton; Hindhead and Lythe Hill, Haslemere, collected by W. M. Rogers: all in v.c. 17.

R. imbricatus var. *londinensis*, Rogers. An Atlantic species. St. Paul's Cray Common; Bostall Heath; both in v.c. 16. Addington Hills; Spout Hill, Addington; Barnes Common; Wimbledon Common; Tooting Common; Weybridge Common, near Pirbright, and between Oxshott Heath and Fairmile Common; collected by C. E. Britton; all in v.c. 17. Crosses with *ulmifolius* and *vestitus*.

R. carpinifolius, N. & W. Often with double and pinkish flowers on Chislehurst Common; Hayes Common; both in v.c. 16. Wimbledon Common; Tooting Common; Abrook Common; Epsom Common, collected by C. E. Britton; and Burgh Heath; all in v.c. 17.

R. lindleianus, Lees. Common in the district and rather frequently crossing with other species.

R. erythrinus, Genev., of Rogers's Handbook includes four distinct brambles, not one of which is the true *R. erythrinus* nor altogether *R. argenteus*, N. & W., by which name *R. erythrinus* is now replaced in British lists. Typical *R. argenteus* has the stem epruinose, somewhat hairy, without pricklets or stalked glands; leaves closely sharply irregularly serrate; terminal leaflet rather broadly rhomboid-oval, soft to the touch beneath, the base entire; leaf-prickles and panicle-prickles small; the flowering branch felted and moderately pilose; petals rather large, oblong-obovate, entire, pinkish; stamens white, longer than the greenish styles; the young carpels glabrous. The nearest English plant to this, *R. argenteus* var. *longicuspisidatus*, Sud., does not grow in our district. Next are two related brambles rather close to *R. argenteus* and together constituting the typical *R. argenteus* of Rogers and Focke. One, *R. cryptadenes*, Sud., represented by Set of Brit. Rubi, no. 108, but not inhabiting our district; the other, *R. bipartitus*, Boul. & Bouv., represented by Set of Brit. Rubi, no. 6 (excluding those from Baillie Gate), found by Marshall in 1891 in Surrey, between Hyde Stile and Busbridge, named by him *R. erythrinus*, Genev., and confirmed by Focke. Briggs's Plymouth bramble

described by him in J.B., p. 204, under the same name the year before, is also *R. bipartitus*. *R. bipartitus* has leaves with soft yellowish hair beneath, much as in *R. incurvatus* and *pyramidalis*; basal leaflets very shortly stalked: petals pinkish, moderately large, rather broadly obovate, distinctly notched at the apex; stamens pink especially at the base, longer than the greenish, pink-based styles, top carpels very hairy. The flowers resemble those of *gratus*. The fourth bramble comprised by Rogers under *R. erythrius* is *R. alterniflorus*, M. & L. It has been recorded over and over again from our district as *R. argenteus* (or *erythrius*) or *R. argenteus* f. or var. *eglandulosa*; occasionally as *R. gelertii*, Frid. It is distinguished from *R. bipartitus*, etc., by the glaucescent stem and the flowering branch having a fair number of stalked glands and slender pricklets. It resembles *R. gelertii*, but differs in too many respects from Friderichsen's descriptions to be identical with that bramble. *Gelertii* is described as very prickly; the stem tall not glaucous; leaves grey-green felted beneath; the basal leaflets so long that they exceed the short petiole; terminal leaflet of leaves on the flowering branch much larger, longer and elliptical with sub-parallel sides; petals white, entire; panicle narrow, nearly cylindrical, with very regularly cymose branches; the young carpels glabrous. In *R. alterniflorus* the stem branches early, the main stem and branches lie flat on the ground, growing as much as 20 feet long and becoming quite pruinose. The leaves are glabrous above, white felted beneath but going green as in *R. winteri*. The panicle when normally developed is very large and compound, somewhat corymbosely pyramidal, leafy nearly to the top. Flowers showy, moderately large, pink, sometimes deep pink (e.g., at Wrotham Heath v.c. 16), soon fading where exposed to the sun. Petals oval, notched at apex, abruptly narrowed into the yellowish claw. Stamens pinkish, going red after the petals fall, much longer than the yellowish pink-based, in fine weather wholly pinkish styles. The young carpels are still bearded after they colour. The fruit is copiously produced, fuscous before black, broadly ovoid, large, the carpels equal and larger than in other brambles except the *Corylifolii*. Sepals loosely reflexed after flowering, patent with the tips erect when the fruit turns black. The stem prickles and those of the flowering branch are straight or nearly straight and patent, a few much deflexed, long, slender from a narrow compressed base.

R. rhamnifolius, N. & W., is generally distributed and abundant. The leaflets soon become concave.

R. bakeri, Lees, so long associated with *R. rhamnifolius*, seems closer to *R. schentzii* and *R. pulcherrimus* than to *R. rhamnifolius*. In our district it has lilac flowers, paler outside as described by Lees. Frequent in v.c. 16 and 17.

R. oxyanchus, Sud., Barnet Wood, Hayes (v.c. 16). This is *pro parte* *R. nemoralis* of Rogers's Handbook, but not of Mueller nor of Sudre. It fits exactly the description of *R. oxyanchus*, Sud., in Bouvet's "Florule des Rubus de l'Anjou" (1911), p. 18, but not Genevier's description nor Focke's. It has moderately small flowers; petals pink,

rather narrow, oval, pointed; stamens white, longer than the greenish styles; young carpels glabrous. Panicle prickles much deflexed, straight or falcate. Panicle leaves with a large obovate terminal leaflet. All the leaves have hooked prickles, and the teeth opposite the principal lateral veins larger than the rest. In the German *R. nemoralis*, on the other hand, the panicle has hooked prickles, short branches at its base, deeper coloured and larger flowers, and pink stamens and styles. *R. imbricatus* var. *londinensis* has often been reported as *R. nemoralis*.

R. schentzii, Lindeb. An interesting northern species, is still to be found, in small quantity, on Tooting Common (v.c. 17), where C. E. Britton found it many years ago. The hairy anthers, very long stamens, large flowers and fruit, very prickly stem, and leaves green beneath, enable it to be readily distinguished from *pulcherrimus*. The stem and underside of the leaves are more hairy than one would expect from Rogers's description: the panicle branches divided to the base; flowers deep pink inside, much paler outside; prickles much curved and strong-based on the petiolules and midribs; the bracts, bracteoles and stipules unusually broad.

R. dummoniensis, Bab. Bostall Heath (v.c. 16), Reigate Heath and Sandhills. Witley (v.c. 17), with pink flowers. An Atlantic species.

R. pulcherrimus, Neum. (non Hooper). Frequent through v.c. 16 and 17. Bigberry Wood (v.c. 15). Northern.

R. lindebergii, P. J. Muell. Sandhills, Witley (v.c. 17). Another quite northern species.

R. villicaulis var. *atricaulis* (P. J. Muell.). Hayes Common (v.c. 16); Weybridge Common and downs above Albury, collected by C. E. Britton (v.c. 16). Stem deep purple brown; prickles falcate with hard resistant points. Leaves bright green, thick, small, glabrous above, grey felted and softly villose below: petiole broadly, shallowly channelled throughout, the stipules high, falcate, semi-lanceolate. Terminal leaflet suborbicular, cuspidate, base entire or nearly entire: teeth simple, subequal but irregular, some patent, shallow with long points. Prickles on flowering branch unequal, patent, falcate and hooked. Panicle dense, short and broad, truncate; with some sunken sessile and subsessile glands, but no stalked glands. Flowers of moderate size, pink: petals oval, shallowly notched; sepals with a conspicuous, narrow white border, reflexed in fruit; stamens pinkish, longer than the yellowish, pink-based styles. Young carpels thinly pilose. Anthers glabrous. Fruit oblong.

R. selmeri, Lindeb. Petals always somewhat lilac (bluish) in this district. "Normally bright pink"—Rogers. Common in v.c. 16 and 17.

R. laciniatus, Willd. Probably a form of *R. selmeri*. It is found in v.c. 15 (e.g., Bigberry Wood), v.c. 16 (e.g., Chislehurst Common and Abbey Wood) and in v.c. 17 frequently. Seedlings are true to type.

R. calvatus, Blox. Abundant on Addington Hills and near Selsdon, v.c. 17. With red styles.

R. rhombifolius, Weihe. Chislehurst Common; Dartford Heath; both in v.c. 16. Walton Common (v.c. 17), collected by C. E. Britton: var. *megastachys*, Wolley Dod, at Abrook Common (v.c. 17). This last, described by Wolley Dod as a variety of *R. rhombifolius*, differs little if at all from *R. schlechtendalii*.

R. gratus, Focke. This beautiful bramble is not uncommon in the district. I have seen it at Burgh Heath and Putney Heath, near the Reservoir, in v.c. 17, and at Chislehurst Common, Eltham Common and Bostall Heath (v.c. 16), at which last locality it is abundant. At Burgh Heath and at Chislehurst it pushes up through thick gorse. I have seen it also from Hurt Wood (v.c. 17), collected by C. E. Britton; and from near Hambledon (v.c. 17), collected by Marshall in 1891; and from Bigberry Wood (v.c. 15).

R. candicans, Weihe. With white flowers at Claygate (v.c. 17); with pink flower at Farnborough Common (v.c. 16).

R. ramosus, Briggs. St. Paul's Cray Common; Farnborough Common; Hayes Common; and Barnet Wood, Hayes (all in v.c. 16). Littleworth Common; Esher Common; Walton Common; Weybridge Common; Tooting Common; all collected by C. E. Britton, all v.c. 17. Abrook Common, v.c. 17.

R. winteri, P. J. Muell. This is the bramble which Rogers described under the name of *R. argentatus*, P. J. Muell, and which nowadays is named *R. godroni*, Lec. & Lam. Mueller himself said that *R. godroni*, Lec. & Lam. was the same as his *R. argentatus*, he having seen an authentic specimen of *R. godroni*. It is, however, by no means identical with his *R. winteri*, as a perusal of Lecoq & Lamotte's or Godron's description shows. It is a French bramble, and it is noteworthy that the French batologists, Boulay and Sudre, both keep *R. godroni* and *R. winteri* separate. We have not in Britain *R. godroni* in the sense in which the name was used by Lecoq & Lamotte and by Godron. Our plant *R. winteri*, P. J. Muell., is abundant in v.c. 15, 16 and 17. It has a wide circle of allies widely separated from it in our present arrangement, e.g., *R. griffithianus*, Rogers, and *R. alterniflorus*, P. J. Muell.

R. robustus, P. J. Muell. Although this appears in Rogers's Handbook and in the London Catalogue, I am convinced that it does not grow in Britain. The work Rogers quotes for *R. robustus* does not contain a description of *R. robustus* at all. The true *R. robustus* has the stem not pruinose, sharply channelled; stamens much longer than the styles; terminal leaflet nearly round, shortly pointed; panicle broad, not very long, slightly diminished to the top.

R. clivicolus (A. Ley). A frequent roadside bramble in many places near the Kent-Surrey border, especially under trees or hedges; readily recognised by its small, shining and hairy, convex leaves, collecting the dust. Its sharply, closely, somewhat doubly toothed leaflets are quite unlike *R. winteri*, with which it is associated in our lists; and it is too glandular for the *Discolores*.

R. ulmifolius, Schott. A Tertiary species. Sudre has shown ("Excursions Batologiques," p. 192) that Mercier included under *R.*

rusticanus not only very different forms of the present specific group but also *R. bifrons*, Vest., and hybrids of *R. ulmifolius* and of *R. tomentosus*, Borek. *R. ulmifolius* is abundant on clay in our district, but is largely replaced by *R. winteri* and *R. macrothyrsus* on siliceous soils. It crosses spontaneously with many species, *e.g.*, with *R. winteri*, *vestitus*, *caesius*, *foliosus*, *alscitus*, *imbricatus* var. *londinensis*, *macrothyrsus*, *lindleianus* and *questierii*.

R. subinermis, Rogers. Abundant in woodland parts of v.c. 16 and 17, growing sometimes in company with *R. macrophyllus*, N. & W., as at Chislehurst Common (v.c. 16). Sudre supposes it to be nearly the same as *R. ramosus*, Briggs, which he takes to be *R. clethraphilus*, Genev. The last named species, however, has flesh-pink flowers, comes into flower at the end of May in France at the same time as the *Suberecti*, and is more closely related to that group than our *R. ramosus* is. *R. clethraphilus*, *R. ramosus* and *R. carpinifolius* seem, however, to have much in common. As to *R. subinermis* few British batologists would, I think, agree that it has anything in common with those three species; nor, in my opinion, does it associate well with *R. pubescens*, or with the *Discolores* at all. The *Discolores* as a group are sun-lovers, they flower late, and have broad showy petals. *R. subinermis*, on the other hand, comes into flower rather early (about the 12th June, *pace* Focke), has narrow white petals with a green base, very large flaccid leaves, and very long stems and branches, adapted to its woodland habitat. The stem is green, blunt-angled and grooved, with close short felt, a few simple and branched hairs, numerous sessile glands (when growing in the open) and a few stalked glands and pricklets; and becomes glaucous in October. The prickles are small, stout-based, short, falcate or declining, subequal. The leaves are rough above, thinly pilose beneath on the prominent veins, as well as grey-green felted all over beneath: they become very convex when old. The terminal leaflet has a short stalk, is obovate cuspidate, with an emarginate base; the margin is rather unequally, somewhat doubly, serrate; the petiole prickles, small, strong-based, hooked red; the petiole stout, short, slightly grooved, felted and hairy. The stipules are filiform, with sessile glands towards the base and stalked glands towards the apex. The flowers are small, white; the petals oval, incurved, with a short wide, greenish claw. The stamens are white, longer than the green styles. The young carpels are pilose; the fruit rather large, and sweet. The panicle is cylindrical above, narrowly pyramidal below; the upper branches fasciculate or deeply divided, cymose, patent. It retains its leaves during the winter: the petals do not assume the characteristic patent direction with sides reflexed that they do in the *Suberecti*; nor have the pedicels *erect* hairs, nor are the berries glossy as in that group.

ARCHAEOLOGICAL INSPECTIONS

Lambourne Church.—Visited

THIS church proved disappointing for, although the whole of its core is early medieval, the building underwent such a thorough restoration in the 18th century that but little of the original work is now visible.

The church consists simply of a nave and chancel, the former built in the middle of the 12th century and the latter rebuilt in the latter part of the 13th century. Till the 18th century, apart from alterations in the fenestration, the church was apparently but little altered. However, when its Waterloo came it did come, and although the plaster work in the interior is a very good example of 18th century plaster work, there is nothing now inside the church to suggest that it is really a medieval structure. Outside there are two reset blocked Norman doorways in the north and south walls respectively. The one in the north wall has some interesting if not unique diaper work. In the south wall of the chancel there is a very interesting stained glass window of German or Swiss 17th century glass..

Ruislip Church.—Visited

This is a very interesting church and suggests several problems, especially with regard to the evolution of the plan.

Presumably it consisted originally of a small rectangular Norman church, (now the south aisle), built somewhere before 1200, and, apparently, without a chancel arch. It was the church of a priory, which was a cell attached to the Abbey of Bec. About the middle of the 13th century the monks built the present nave and cut its south arcade in the north wall of the original church. This nave, apparently, was without a north aisle, but had a chancel, smaller than the present one, which replaced it about a hundred years later. The north arcade raises an interesting question. It is clearly of a later date than the south arcade, and was cut in the north wall of the nave; but whether it is contemporary with the present north aisle, late perpendicular, or whether this aisle replaced an earlier one, is not quite clear.

In medieval churches the weight of the roof often caused an outward thrust of the walls supporting it, so the line of the springing of the roof was not perpendicular with that of the foundation of the walls, that is to say, the walls sloped outwards. Hence when the medieval builders wished to cut an arcade in such a wall there were complications. Both the north and south walls of the present nave at Ruislip had these outward thrusts and in each case the difficulty was met in a different way. In the south arcade the pillars themselves incline so that the springing of the arches of the arcade can be central on the capitals. In the north arcade, however, the pillars are straight, but the arches do not spring from the centres of the capitals.

W. C. FORSTER.

NOTES ON THE WOODLARK

By JOHN E. S. DALLAS

AMONGST the changes in status which have taken place since the war with many species of English birds, perhaps none is more pleasing than the increase in numbers and extension in range of the Woodlark, *Lullula a. arborea* (Linn.). Mr. C. Oldham suggests that the cutting down of woodlands, rendering new areas suitable as territory for the species, may have contributed to its spread. Whatever the cause, records show that the increase has been general, and in the last five or six years the Woodlark has become a resident in the Society's district.

For many years the species has been recorded on Wimbledon Common during the autumn; my own introduction to it was on Mickleham Downs some five winters ago, when a party of six birds was seen, and it is mostly in this sub-district that the species has since been observed.

In 1926 birds were recorded in the Boxhill area during the whole summer, and on June 20th I found an empty nest, which may have been a Woodlark's, near to the constant haunt of one pair. This year (1927) I saw a pair on April 3rd; on May 15th I heard the male singing and soon after drove the female from a cup-shaped cavity among bracken. On the 22nd the male was singing on the ground, but I could not find the nest until May 28th, when I put off the female from a nest with four eggs. Whitsun intervened, and at my next visit soon after, I was grieved to find that the nest and eggs had been removed. The disaster was perhaps not unexpected in so frequented a locality, but is none the less regrettable. A party of four birds was seen in the neighbourhood in early October; let us hope that a brood may be successfully raised there next year (1928). It is pleasing here to recall that nesting has recently been recorded in Richmond Park.

My earliest date for full song is April 2nd (1926), and I have heard it on various dates throughout April and May, when it is at its height; song has, however, been recorded for most months of the year. The bird rises from the ground, and when a short height above it, begins its very sweet song. A phrase consisting of one or two liquid notes repeated about half a dozen times is followed by a pause equal in length to the burst of song; then phrases of song with pauses of equal length follow each other throughout the performance. These phrases are of great variety, and however inadequate the method of notation, I give five as they sounded to me;—*Ke-tee, ke-tee, ke-tee* - - - -, *Tili, tili, tili, tili* - - - -, *Ti, ti, ti, ti* - - - -, *Kee-te, kee-te, kee-te* - - - -, *Whiu, whiu, whiu, whiu* - - - -.

I thought the pitch a trifle lower than the Skylark's song, but of course the pauses between the phrases readily distinguish the song of

the Woodlark, which, because of them, lacks something of the wild spontaneity of the Skylark's. During the whole performance the bird mounts in spirals to a very great height, descending in the same way until about a hundred feet from the ground, when it drops straight and very rapidly to earth. Song is also uttered from the ground or from a bush or tree; in the latter case the bird often glides down to its singing place somewhat in the manner of a Tree-Pipit.


In general habits the Woodlark resembles the Skylark, but it affects open country with woodland interspersed. In the field, the safest distinguishing points are the general lighter colour of the plumage, the shorter tail and more rounded wings, the broader light stripe above the eye, and the white mark followed by a dark brown one on the edge of the wing.

The Woodlark is rather earlier in commencing its nest than the Skylark; my own earliest date for a clutch of four eggs is April 19th (1924). The eggs of the two species are very similar—the Woodlark's a trifle smaller—but the nest of the latter is usually placed among higher growing and denser vegetation. A good point to notice, if the bird is flushed from the nest, is the outspread tail showing brown margins and a much lighter central portion.

It is to be hoped that the Woodlark may soon become one of the quite familiar bird residents within the Society's area.

CUCKOO TAKING EGGS

By H. J. BURKILL

 N West End Common, Esher, on May 29th, 1926, I heard the bubble note of the Cuckoo, and immediately two Cuckoos flew out from behind a big bush of willow (*Salix cinerea*), from, apparently, an old birch tree. They were courting in the air, flying round in the wildest manner in front of, or above me, twice passing within a few yards of where I was standing out in the open. The female settled twice on the ground followed by the male.

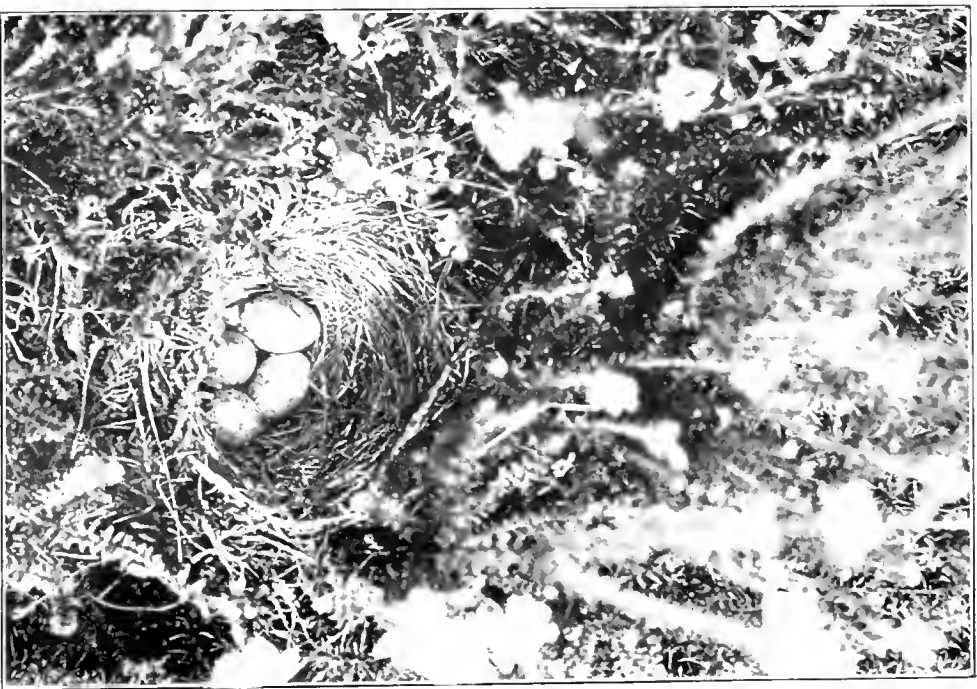
The female then dashed into a small birch bush some eighty yards away from me. I did not see any other bird emerge from this bush.

The Cuckoo flew out after about five seconds in the bush.

I then walked across to this bush, and as the ground was rough I had to pay some attention to my feet, so could not keep my eyes on the bush all the time. When I was some ten yards away a reddish-brown bird flew out from the opposite side. She flew straight, no wavy flight, but hard level going about three feet from the ground, showing conspicuous white tail feathers. All I could see of the colours were the reddish-brown back and the white tail feathers. She flew away to a clump of gorse.



In Bracken



In Heather

Nests of the Wood Lark

Photographed on Box Hill by J. E. S. Dallas



In a clump of rushes (*Juncus*) I found a nest composed of grass, about eight inches from the ground, and under the north side of the bush. It contained four light blue eggs, marked with several small light brown and dark purplish spots at the thicker end.

From the appearance of the bird as it went away I had rather expected a Yellow Hammer's nest, but the nest was not that, nor were the eggs those of that species.

I walked back to the path some 80 or 100 yards away and sat down on some stonework to eat my lunch.

About two minutes later a shadow passed close to my feet, and looking up I saw the female Cuckoo flying down. She went straight to the birch bush in the same way as she had done before. The female parent flew off as she had done when I approached the nest, going low and straight over the ground to the bushes she had gone to before. The Cuckoo had disappeared into the bush.

The male Cuckoo now arrived from a different direction, *i.e.*, the north, and settled on the top of the bush, which was about six feet high. Here it was at once attacked by the male parent and driven off, followed by the smaller bird.

Alarm notes were heard just after continuously, but I could not say what species, but they were probably from the two parents. All my attention was focussed on the bush, as I was clocking the time the Cuckoo stayed there. After 6 minutes 18 seconds the female Cuckoo emerged and flew northwards pursued by the two parents.

There was no visible or audible sign of the male Cuckoo then.

Two minutes later a Cuckoo began calling from a hill to the south.

Three minutes later, having noted the above in my note-book, I walked across to the nest. It was empty, the four eggs having gone.

There was no sign of shells or yoke stains. A clean sweep had been made of all. There was no trace of shells in the region round the bush or rushes. The only thing that showed displacement was a thin twig of the birch, *Betula verrucosa*, that had been depressed into the rushes by the side of the nest.

I again examined the nest, this time more fully, as I could now handle it without disturbing the prospects of the family. It was made of grass, coarser on the outside, lined with finer.

I regretted that I had not taken an egg for the purpose of identification, but I believe that the nest was a linnet's, though the situation was unusual for that species.

THE WOODEN WALLS OF GREEN-STEAD NAVE

A Note of Interrogation

By E. CHAPMAN

THE "Essex Review" for January, 1927, opens with an interesting article on Smart Lethieullier, of Aldersbrook House, by C. H. Ivan Chown, A.C.A. Mr. Chown sketches the career of this intelligent Essex gentleman, whose Huguenot ancestor had taken refuge in England from Flemish persecution, and had prospered. Smart was born in 1701 at Aldersbrook House, Little Ilford, and here in 1760 he died. His life is typical of that of many wealthy and intelligent men of his time. He graduated at Trinity College, Oxford, and soon after was elected F.R.S. and F.S.A. He travelled in France, Germany and Italy, collected coins and curios, wrote a paper on the Bayeux Tapestry, and corresponded with many of his learned contemporaries. But he has left one enduring mark in English ecclesiology, and to this Mr. Chown makes no more than a slight incidental reference, perhaps thinking it common knowledge to all readers of the "Essex Review."

On 12th January, 1752, Lethieullier addressed a letter to Dr. Lyttleton, then P.S.A. The opening words indicate its theme :

"In obedience to your command I send you the best account I can collect concerning our very singular parish church at Greenstead, juxta Ongar, in this county."

He describes the structure of split oak logs which forms the nave, and gives careful measurements. But the important point in the communication is reached when he says :

"It was no small pleasure to me to meet with a passage from an ancient MS., which in some measure, I think, determines the time and occasion of erecting this uncommon fabrick."

He then quotes from "Registrum Cœnobii Sancti Edmundi," preserved in Dugdale's "Monasticon," the entry now so famous, relating to the translation of St. Edmund's body from London to St. Edmund's Bury in 1013 :

"Iudem apud Aungre hospitabat ubi in ejus memoria lignea capella permanet hodie," which may be translated : It (the saint's body) was likewise entertained at Ongar, where a wooden chapel in his memory remains to this day.

Lethieullier proceeds to argue that the nave of Greenstead Church is none other than the wooden chapel at Ongar, and that we "may reasonably conjecture that this wooden fabrick was at that time erected

on purpose to receive the holy body, and having been once so honoured, was preserved with veneration and converted into a parish church, with the addition of a small chancel in much later ages."

Few of the "reasonable conjectures" of the eighteenth century antiquaries have had so prosperous a career as this of Smart Lethieullier. It has passed, not as a conjecture, but as an established fact, into nearly every text-book of English ecclesiology, into the county histories, and, of course, into numberless popular manuals and local guide-books. It has indeed been modified or, rather, extended in one particular by Dr. J. C. Cox in his careful account of the church in "The Builder" of 8th October, 1904. He accepts fully the connection with St. Edmund's translation. "There is not," he says, "the least reason to doubt the correctness of Lethieullier's assumption that this is the very building that gave shelter to the body of St. Edmund on its return from London to Bury St. Edmund's in 1013, and that the old primitive building was subsequently retained unaltered in consequence of the honour that had been thus done to it. But where Mr. Lethieullier, followed by other antiquaries, is almost certainly wrong is in the suggestion that this wooden shelter was run up hastily for the mere purpose of affording a night's lodging for the much-venerated body of the saint. Against such a surmise there are several strong arguments. In the first instance, the words cited from the old register do not bear out this idea; the natural translation of the terms used implies that the wooden chapel remained or was preserved because of the use to which it had been put, and that there was a wooden consecrated chapel on the site when the body arrived. The notice of the approach of the body could have been but very brief, and the timber building with south and north doorways shows no sign whatever of hasty erection. Had the building been subsequently consecrated because of sheltering the body, surely it would have been dedicated to St. Edmund, and not (as is the case) to St. Andrew. Moreover the old part of the fabric is not in the least what might be expected in the XIth. century, but rather pertains to a period earlier by one or two centuries. By the beginning of the XIth. century, churches of stone were certainly the rule not the exception. Bede tells us that when Finan first erected his celebrated missionary church at Lindisfarne in 652, the bishop was content with one which was not built of stone, but after the Scottish fashion, composed of cleft oak thatched with reeds (*More Scottorum de robore secto totum composuit atque harundine texit*). The term 'cleft oak' is singularly appropriate to the nave of Greenstead church."

In view of the illustration from Bede one can only admire the moderation with which Dr. Cox assigns the nave to "a period earlier by one or two centuries" than 1013. Why not three or four? Why indeed may not this, like the cleft oak church of Lindisfarne, be assigned to the days of the first conversion of the Saxons?

Prof. G. Baldwin Brown in "The Arts of Early England" lends his great authority also to the ascription of the nave to the Pre-Conquest period, but does not offer any argument to show that the workmanship is in any respect peculiar to that period.

The Royal Commission on Historical Monuments, in the Inventory for Central and South West Essex, classifies the nave as Pre-Conquest, but in the description is more cautious. "The nave is possibly the timber chapel built c. 1013 to commemorate the passing through Ongar of St. Edmund's body. A chancel of rubble was added at some uncertain date." It is a pity, I think, that the officers of the Commission, with all their technical resources and assistance, did not give the matter more detailed investigation, for they had, "possibly," the oldest nave of any parish church in the region of their Survey. It is obvious, however, that they had read with fresh eyes the "*Registrum Cœnobitii Sancti Edmundi*," for "built to commemorate the passing through Ongar of St. Edmund's body" is much nearer to the text than the ingenious gloss which Dr. Cox, in the passage quoted above, describes as a "natural translation."

Far more robust is the faith of the Very Rev. Prior Mackinlay, O.S.B. In his curious "*Saint Edmund, King and Martyr, A History of his Life and Times with an account of the Translations of his incorrupt Body, etc., from Original MSS.*," he has the following passage on Greenstead Church, though he gives no reference whatever to his Huguenot authority:

"The holy body next rested at Greenstead within the parish of Chipping Ongar. The faithful hastily erected a church there to receive the sacred relics. [It still stands, the oldest church in England—footnote.] Chestnut trees were sawn lengthways into two, and the halves set upright in a sill and plate to form the walls. Sixteen of these half trunks, and two doors form the south side, and twenty-three the north. In this rough edifice the body of St. Edmund remained for some days, in order to satisfy the devotion of the faithful, and then Ailwin proceeded on his way" (p. 175, ed. 1893.)

"Among all these relics of a past history the little wooden church at Greenstead in Essex stands unique. . . . Built of wooden planks in the year 1013 to shelter St. Edmund's body on its way from London, it was preserved with care and reverence till the sixteenth century. Then, being considered valueless, it escaped the destruction which befel so many venerable sanctuaries, and has survived to the present day" (p. 351).

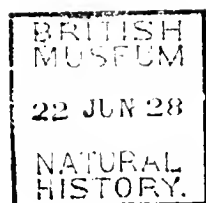
At Greenstead itself, the acceptance of Lethieullier's "reasonable conjecture" has been complete, and an old panel painting of St. Edmund has been added to the ornaments of the church. By the kindness of Messrs. Forster and Yates, a print of it adorns this paper. The Rev. P. W. Ray, the rector at the date of the drastic restoration in 1849, issued in 1869 a *History of the Church*, in which he makes the statement that "the inhabitants of the village also have always had a tradition that the corpse of a king rested in it—moreover, this curious church has long been known to antiquarians, and identified as the original shrine of St. Edmund by the monks" (p. 14). He adds somewhat feebly, "it is held by many to be a genuine Anglo-Saxon building." There is no mention in his book of the panel painting.

That so pleasant and picturesque a conjecture as that of Smart



OLD PANEL PAINTING OF ST. EDMUND
(Greenstead Church

Photographed by E. Yates



Lethieullier should have won general acceptance is not surprising, but surely it is time that its bases should be carefully re-examined.

Towards that end, though with no better equipment than a mildly sceptical bias, and a desire to understand the building in question, I should like to indicate a few matters on which further light is desirable.

First, then, as to the "Registrum Cænobii Sancti Edmundi," printed in Dugdale. There appears to be no evidence as to its provenance or date or present home if it has survived. If it is the document referred to by Prior MacKinlay as "Curtey's Register," it is not of earlier date than the first half of the fifteenth century. It appears to be the only mediæval document which makes any mention of "Aungre" in connection with St. Edmund's translation from London to Bury in 1013. The great poem on St. Edmund, by John Lydgate, who was a monk at Bury, gives much detail of the journey, both to and from London, and describes the halt at Stapleford, the first stage on the homeward journey, but says nothing of Ongar. It would be instructive if we could ascertain within a decade or so when the "hodie" of the crucial passage really fell.

I do not want to stress too heavily the point that the monk's register says "Aungre," and not the adjoining parish of Greenstead. But whatever else they may have been, were not these registers fairly exact in their names of places? Perhaps "apud" may be used in the sense of "near" as well as in the sense of "at."

Even assuming that the writer of the register had the nave at Greenstead in mind, he does not say that St. Edmund's body rested in it, but that a wooden chapel in his memory still existed. Whatever date may be assigned to "hodie," I think it will be granted that at that date Greenstead nave was the nave of a parish church.

I feel strongly the force of Dr. Cox's observation that a chapel erected for (and *a fortiori* in memory of) St. Edmund, would bear his name, whereas Greenstead Church is dedicated to St. Andrew, but I cannot follow his reasoning that the building and the dedication are therefore much earlier in date.

Secondly, as to the employment of timber. Though I know of no other example so crude in the walls of a church, ancient or modern, yet the poverty of mediæval Essex in building material before brick again became general, and the consequent use of timber in such neighbouring parishes as Blackmoor, Navestock and Margaretting, when, in the 15th century, bell-towers were wanted, are notorious facts of Essex ecclesiology. Greenstead was a small and poor parish, and unless there are unquestionable features in the workmanship which mark it as of earlier date, I fail to see anything in the structure itself which compels us to look beyond the 13th or 14th century for its origin.

According to the currently received hypothesis, the timber structure was originally a closed quadrilateral, but the timbers at the east ends of the walls afford, so far as my observation goes, no indication of this. Herein they differ from those of the west ends. Of course, the

structure may have been shortened at the east end when one of the chancels was erected, or, at the restoration in 1849, the end timbers may have furnished the "spare sections of the ancient timbers" with which the covers of the Church Books were made, otherwise some trace of these massive logs might have been looked for.

I submit, then, that no satisfactory evidence has yet been adduced to show that the nave is any older than the "rubble chancel of uncertain date" which preceded the present chancel of brick, or that the structure ever had any other purpose than that of the nave of a poor parish church.

MIGRATION OF GULLS

DURING the autumn of 1927 there was a considerable influx of Lesser Black-backed Gulls (*Larus fuscus fuscus*) to some of the western reservoirs in the London area. I visited Barn Elms Reservoirs (the four eastern waters at Barnes) on thirty-five occasions between 1st March and 20th September. No birds of this species were noted in March, April or the first half of May. On May 14th there was a single (brown) bird; then one or two birds at most visits up to July 29th. On August 3rd, when there were fifteen birds, the main influx began; the numbers grew steadily until on August 29th there were fifty-seven on the reservoirs, and a hundred odd on the Thames mud just below. On 6th September there were ninety-eight birds at Barnes in addition to thirty on the Longdale Road filtering beds. The influx spread at any rate as far west as the Littleton Reservoir, where there were sixty or more birds on August 26th.

The following points should be noted.

- (a) Three quarters of the birds or thereabouts were in brown plumage, the remainder being black and identifiable. I have assumed above that all these brown birds were Lesser Black-backed Gulls. As, during the period of observation no mature Herring Gull and no mature Greater Black-backed Gull was seen, whilst there were always in the flocks say 25 per cent. of adult Lesser Black-backed Gulls, the assumption seems fair that the whole, or the great bulk at least, of the brown birds were Lesser Black-backed Gulls.
- (b) I was out of London from the 1st to the 23rd of July, for which period I have no records. The main influx does not, however, seem to have begun until later, August 3rd.
- (c) My notes for the autumn of 1926 contain no indication of an influx of these birds on such a large scale.

After September 6th the Lesser Black-backed Gulls rather rapidly disappeared from the reservoirs.

J. P. HARDIMAN.

EAST WINDOW, OXTED CHURCH

By W. C. FORSTER

IN August last, when we visited Oxted Church, I consulted the guide books and found several contradictory statements with regard to the east window of the chancel. The Victoria County History, even, is not consistent in its descriptions of the window. In the general account of the church architecture of the county, in Vol II, the window is stated to be fourteenth century and one of the finest in the county, and the flowing design of the tracery singularly beautiful, whereas in the detailed account of the church, in Vol IV, the window is described as modern, of cinque-foiled lights with an elaborate traceried head, probably copied from the previous one, containing some of the old stone. Also in several of the guide books the window is said to be fourteenth century, and the outside mouldings of the tracery to have been barbarously pared down in the seventeenth century. The penny leaflet, on sale in the church, states that the window is fourteenth century.

Among the many accounts of the window I have read, the one which seems to me to be the most accurate, is the one in Brayley's "Surrey", published, I think, in 1845. From this I quote.

"The church was injured by lightning in 1637, which date over the east window records a restoration . . . The chancel was burnt by a great tempest of lightning in 1717 . . . After the second fire, a wooden framed window was placed in the chancel and two smaller windows in the south aisle and two in the north aisle. The east window, and those in the north aisle, were taken out in 1838 and the present handsome ones, presented to the church by the Rector, placed in their stead."

In the Graingerised copy of Manning and Bray, in the British Museum, there is an illustration of the church as it appeared before the insertion of these windows in 1838. This picture shows the east window as square-headed, presumably of the size of the present one up to the springing of its arch; so all the tracery at the head of the window must be modern. What presumably happened was that, after either the first or the second fire, the east end of the chancel was so damaged that the gable had to be partly rebuilt, and then the window was made square-headed. The date, 1637, in the gable is somewhat difficult to account for, because the actual stucco on which it is inscribed evidently dates from 1838, when the present window was inserted. This is quite clear if you compare the stucco round this window with that round one of the windows in the north aisle, which was

inserted at the same time, and which, according to the picture in Manning and Bray, took the place of a much smaller window. The date, 1637, evidently refers to the repairs to the chancel after the first fire.

With regard to the tracery of the east window, the motif of the tracery is evidently copied from the tracery of the four windows in the north and south chancel walls, but it is not period tracery. It is sophisticated by little trimmings which have nothing to do with the fourteenth century. This is clearly brought out in the accompanying photograph of the outside of the window. This photograph also shows the flattened mouldings. The same kind of mouldings were also used in the aisle windows in the nave.

This east window is a very interesting example of 1838 Gothic, but is certainly not fourteenth century.

THE BRITISH ELMS

THE following key to the identification of the British species of *Ulmus* is extracted from a paper read before the Society at Winchester House on November 1st, 1927, by Mr. A. Bruce Jackson, A.L.S. :—

Upper surface of leaves rough, petiole $\frac{1}{8}$ - $\frac{1}{5}$ in. long.

Leaves averaging 3-5 ins., seed cavity in centre of samara, *U. montana*.

Leaves averaging 2-3 ins., seed cavity above middle of samara, *U. campestris*.

Upper surface of leaves smooth, petiole $\frac{1}{5}$ - $\frac{3}{8}$ in. long.

Leaves broadly oval or obovate 3-5 ins. long, 2-3 $\frac{1}{2}$ ins. broad.

Leaves dark green, lateral nerves 12-14 pairs, basal branches, with corky ridges, *U. major*.

Leaves pale green, lateral nerves 14-18 pairs, basal branches, without corky ridges, *U. vegeta*.

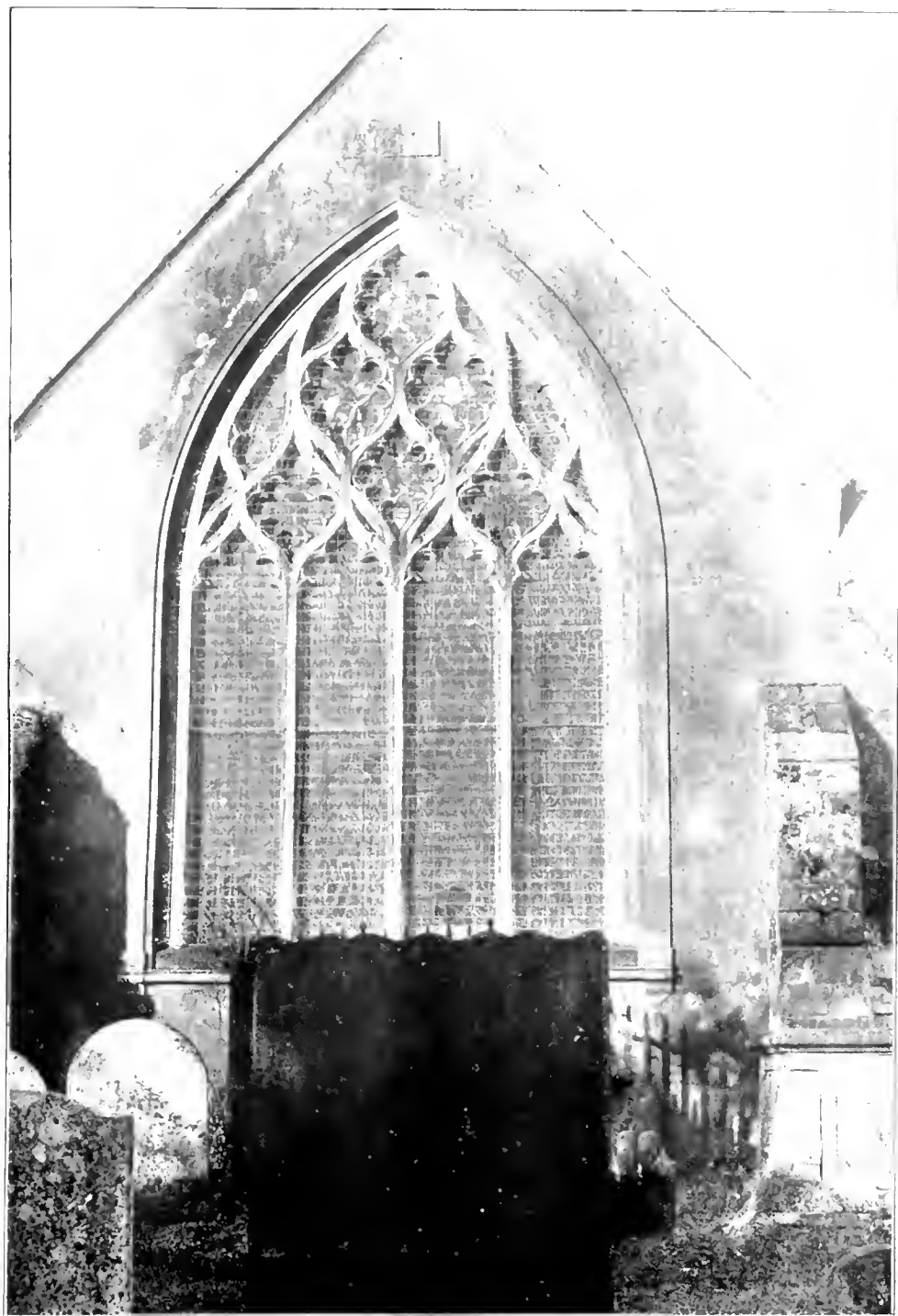
Leaves oval obovate or elliptic 1 $\frac{1}{2}$ -3 $\frac{1}{2}$ ins. long, 1-2 ins. broad.

Tree with a wide spreading crown and erect or pendulous branches, leaves 2-3 $\frac{1}{2}$ ins. long, 1-2 ins. broad, *U. nitens*.

Tree with short ascending branches, leaves obovate to oval, concave, 1 $\frac{1}{2}$ -2 $\frac{1}{2}$ ins. long, *U. stricta*.

Tree with ascending branches and pendulous branches, leaves obovate to elliptic, flat, averaging 1 $\frac{1}{2}$ -2 ins. long, *U. minor*.

Tree of fastigiate habit, leaves broadly oval or almost orbicular, 1 $\frac{3}{4}$ -2 ins. long, *U. Wheatleyi*.



THE EAST WINDOW OF OXTED CHURCH
Photographed by R. W. Robbins

NATURAL
HISTORY

BRITISH
MUSEUM
22 JUN 28
NATURAL
HISTORY.

LONDON BIRDS

By A. HOLTE MACPHERSON

SUMMARY OF NOTES IN 1927

○ **N January 10th**, forty-one Pochard on the Round Pond, where they have become most tame.

JANUARY 13th, a Black-headed Gull has completely acquired its dark head. Another bird of this species standing by the Serpentine had the whole of its throat, breast and under parts black with oil; as it faced me at a distance of 120 yards it resembled a Grey Plover in spring plumage. Luckily its wings had escaped contamination and it could fly well. A Mistle Thrush was singing in Kensington Gardens.

JANUARY 17th, a hundred and ten Tufted Duck on the Serpentine.

JANUARY 26th, Mr. L. Parmenter tells me he saw a Goldcrest in the Hyde Park Sanctuary to-day.

JANUARY 28th, the number of Pochard on the Round Pond has increased to fifty-eight; the old drake Gadwall was among them.

JANUARY 31st, counted sixty-one Pochard on the Round Pond.

February 1st, Mr. L. Parmenter to-day saw a Bullfinch in the Hyde Park Sanctuary.

FEBRUARY 2nd, about half a dozen Redwings on the lawns at Hyde Park Corner; snow had fallen during the night. Mr. L. Parmenter saw three Lapwings fly over the Serpentine.

FEBRUARY 5th, heard a Chaffinch in song.

FEBRUARY 16th, a Common Gull, which had died in St. James's Park, found to have been ringed in Denmark.

FEBRUARY 23rd, a Blackbird has begun to sing in Campden Hill Square.

March 14th, counted sixty Pochard on the Serpentine; they have lately become almost as numerous as Tufted Duck.

MARCH 15th, nearly all the Tufted Duck have left the Serpentine, but there are still many Black-headed Gulls, including a large proportion of adult birds now in full breeding plumage.

MARCH 30th, all Pochard have now left both Round Pond and Serpentine, and only three or four Black-headed Gulls remain.

April 2nd, the drake Gadwall is back on the Serpentine in company with a Wild Duck.

APRIL 10th, Mr. L. Parmenter tells me there was a Great Crested Grebe on the Round Pond this evening.

APRIL 12th, Stock Dove calling in Kensington Gardens. Willow Wrens have come; heard two singing in Hyde Park.

APRIL 13th, several pairs of Tufted Duck still on the Serpentine.

APRIL 14th, heard a Chiff-Chaff singing in Hyde Park by the Dell.

APRIL 20th, Blackcap and Chiff-Chaff in song in the grounds of Holland House.

APRIL 23rd, Mr. R. G. Stonham says he saw Swallow and House Martin over the Long Water this morning.

APRIL 28th, saw a Chiff-Chaff, which, after singing near the Hyde Park Sanctuary, took a dip in the Sanctuary bird bath.

APRIL 29th, Mr. R. G. Stonham heard a Sedge Warbler by the Long Water, and Mr. L. Parmenter a Whitethroat in the Hyde Park Sanctuary.

May 2nd, Mr. R. G. Stonham saw a Swift to-day over the Long Water.

MAY 3rd, listened to a Wood Wren singing near the Hyde Park Sanctuary.

MAY 4th, a Garden Warbler singing close to the Peter Pan statue. One of the Egyptian Geese has again paired with a Canada Gander; there are eight hybrid goslings by the Long Water.

MAY 5th, a Greenfinch singing by the Flower Walk.

MAY 7th, a pair of Spotted Flycatchers has arrived in Kensington Gardens.

MAY 12, saw another pair of Spotted Flycatchers by the Ranger's Lodge in Hyde Park. A Garden Warbler was singing most beautifully close by.

MAY 13th, Mr. L. Parmenter tells me that on this day he saw a Redshank near the Ranger's Lodge; it flew to the north, calling at intervals. It is six years since a Redshank was last reported from Hyde Park. Saw Spotted Flycatchers in the grounds of Holland House.

MAY 25th, heard a Lesser Whitethroat in the Hyde Park Sanctuary.

MAY 30th, two Swifts over the Serpentine; saw several more in the evening over the lake in Regent's Park. Watched a pair of Dabchicks there, but saw no nest.

June 1st, a Blackcap sang in my garden in the early morning.

JUNE 13th, three Swifts by the Serpentine Bridge.

JUNE 17th, a Blackcap singing in Lady Holland's Walk.

JUNE 20th, watched a Great Spotted Woodpecker in the grounds of Holland House, but fear it is a solitary bird. Have heard no "drumming" there this year. Stock Dove calling, and Blackcap and Willow Wrens singing in the grounds. Heard Stock Dove also in Kensington Gardens, and saw some Swifts over the Serpentine.

JUNE 27th, a good many Swifts have been flying over the Serpentine for the last few days. Found a Tufted Duck with six newly hatched ducklings on the water in the Dell in Hyde Park.

JUNE 29th, saw both Pochard and Tufted ducklings in St. James's Park.

JUNE 30th, heard two Blackcaps singing simultaneously in the Kensington Gardens Sanctuary.

July 8th, in the Flower Walk before breakfast, saw young Greenfinches, and have little doubt they were born in the neighbourhood. Afterwards met Mr. R. G. Stonham who told me he had just seen a family party of Greenfinches in Kensington Gardens near the Serpentine Bridge.

JULY 11th, a Heron flew over the Round Pond.

JULY 13th, watched broods of young Spotted Flycatchers near the Kensington Gardens and Hyde Park Sanctuaries.

JULY 19th, counted four broods of Tufted Duck and two broods of Pochards in St. James' Park.

JULY 20th, saw a Tufted Duck with two newly hatched ducklings in the Dell in Hyde Park.

JULY 25th, a Sparrowhawk flew over Campden Hill Square, skimming close over the houses on the east side.

JULY 26th, Willow Wrens have begun their autumn song.

August 18th, Willow Wrens to be heard singing every day.

AUGUST 23rd, two Swifts by the Island in the Serpentine.

AUGUST 31st, saw a Whitethroat in the Kensington Gardens Sanctuary.

September 2nd, Chiff-Chaff singing in Lonsdale Road, Barnes.

October 4th, one Pochard has re-appeared on the Serpentine.

OCTOBER 12th, received a dead Dabchick, which had alighted exhausted in the garden of Grays Inn, Holborn. The gardener put it in a tub of water and fed it on worms and bread. After three days it died. It did not appear to have suffered any injury.

OCTOBER 15th, saw a Dabchick on the Long Water, and a Kestrel by the Kensington Gardens Sanctuary. Blue Tits are unusually plentiful in London just now.

OCTOBER 17th, Kestrel again by the Kensington Gardens Sanctuary.

OCTOBER 19th, Tufted Duck are coming back for the winter, quite a dozen on the Serpentine.

OCTOBER 22nd, received for identification a dead Puffin, an immature bird, which had been found dead yesterday in St. James' Park, where it appeared on October 17th on the lake. This is the first occurrence of this species in Central London since the 20th May, 1887, when one flew in at a window of No. 45, Brook Street, Grosvenor Square.

November 1st, seven Pochard on the Round Pond. The drake Gadwall, who now resides in London throughout the year, is on the Long Water. This is his eighth winter in town.

NOVEMBER 3rd, a Dabchick on the Long Water and twenty-five Tufted Duck, on the Serpentine.

NOVEMBER 10th, twenty-five Pochard now on the Round Pond, all but four are adult males.

NOVEMBER 13th, two flocks of Fieldfares of about twenty and twelve respectively and a flock of about twenty Skylarks flew over the Hyde Park Sanctuary.

NOVEMBER 24th, a Drake Wigeon and three Coot on the Serpentine.

December 12th, a Dabchick on the Long Water.

December 15th, over fifty Tufted Duck now on the Serpentine.

December 18th, very cold: five Redwings by the Hyde Park Sanctuary. Counted a hundred and twelve Tufted Duck on the Serpentine, some eating bread from children's hands.

DECEMBER 20th, over a hundred and thirty Tufted Duck and about twenty-five Pochard on the frozen Serpentine: some Herring and Common Gulls with them. A fair number of Redwings at Hyde Park Corner.

DECEMBER 22nd, the great thaw which began yesterday has melted much of the ice on the Serpentine, where the number of birds is amazing: about 300 Mallard, over 100 Tufted Duck, 50 Pochard, 15 Coot and quite 800 Gulls (nearly all of the Black-headed species).

DECEMBER 29th, the return of cold weather and the snow have brought more Common Gulls into London; there were at least thirty of them standing to-day on the frozen Serpentine. The Redwings at Hyde Park Corner are looking thoroughly wretched.

ELEPHANT HAWK MOTH

TWO almost full fed larvae of the *Chaerocampa elpenor* were found in September in a large patch of *Epilobium angustifolium*.

Placed in a large plant pot about three quarters full of soft yellow sand they were given their choice of *E. angustifolium*, *Galium verum*, and *G. mollugo*, and seemed to have a decided preference for the second one. When ready to pupate they burrowed into the sand, but came up again. They made more than one attempt, but reappeared each time. I then replaced the sand by soil. The larvae repeated their previous performance, and then collected a number of fine roots from the soil, bringing them to the surface, where they formed flimsy cocoons of rootlets mixed with small lumps of soil, inside which they turned to healthy pupae. As this species is so often found in swamps, the moisture resisting power of the cocoon should, one would think, be of considerable importance to the larva. These cocoons, possibly from the scarcity of construction material, would appear to have little chance of withstanding moisture.—H.J.B.

REPORTS FOR THE YEAR

THE COUNCIL

AS the accounts are printed on another page, a brief reference to them will suffice. The general fund balance rose by £8 7s. 5d.; the deficit on the "London Naturalist" fund was reduced by £11 2s. 3d.; and the investment of life composition fees increased by £45. All these fees have now been taken out of the general balances and invested.

The improved condition of the finances was due to a satisfactory increase in membership, new members numbering 65, whilst the losses from all causes were 9. Little change was shown in the numbers of Branch, and Country and School Associates.

An improved form of syllabus was adopted during the year, which also saw a new edition of the rules, emphasizing among other things the sectional organization, and taking power to appoint an Honorary President and Honorary Vice-Presidents. It is with much pleasure that the Council are able to state that Viscount Grey of Fallodon has accepted the invitation of the Council to become the Society's first Honorary President.

A Finance Committee sat during the year, and the principles recommended by it were accepted by the Council. The February exhibition was on a more elaborate scale and was very successful. Thanks to special contributions, it was possible to enlarge the "London Naturalist." The thanks of the Council are due to Mr. Hornblower for completing the printed List of Members by adding the year of election against each name: and to the librarians for re-arranging and cataloguing the library. A printed library list was in contemplation at the end of the year. The sections held, as usual, numerous field meetings. The lectures were of a high level, and the average attendance rose from 44 to 46. The Council would, however, like to see them better attended, and urge members to bring their friends.

The Council highly appreciate the recruiting zeal shown by members and invite them—and especially new members—to continue their efforts. The foregoing paragraphs show clearly what improvements an increased membership can secure.

The Council would be grateful if any members who have the time and inclination to share in the clerical work of the Society or its sections would inform the General Secretary. In various directions such work is expanding, and volunteers would be welcomed.

J. P. HARDIMAN,
General Secretary.

ARCHAEOLOGY

THERE has been a considerable increase in the number of members connected with this section, which now includes more than 50.

The innovation of increasing the number of excursions to one a month has been amply justified by the attendance at such meetings. In this connection mention should be made of the new departure of having an excursion on Whit Monday, when Mr. Hornblower conducted what proved to be a very enjoyable outing, to Thaxted Church; and also of the meeting at the British Museum, conducted by Mr. Skeat, the official British Museum Guide, on February 5th. Mr. Skeat was so well pleased with our party that he wrote offering to conduct us on another occasion. This offer was taken advantage of on November 12th. The Record meeting to Ruislip was also very successful, as it enabled us to get into touch with Mr. Mansford, the architect who restored the church. He went round the building with us and kindly promised to give a lecture at one of the general meetings.

Considerable interest to our excursions has been added by the fact that we now again have a sectional photographer, Mr. Hussey having kindly taken up that position. He has attended most of the excursions and taken some very interesting photographs.

The secretary would like to put on record the great assistance that the syllabus, in its present form, has been to him when writing to the various incumbents of the churches the section has visited. He has made a practice of enclosing a copy of the syllabus, and from the replies he has received it is quite evident that the ready facilities that have been afforded to the section by these clergymen have, in no small measure, been due to their opinion of the syllabus.

Mr. R. Marshman Wattson, at a sectional meeting, gave us an interesting paper on "Pre-reformation Baptismal Founts" on May 17th, and on January 4th Mr. Steinman gave a lecture on Italy at a joint meeting of the Ramblers and the Archaeological Section. These joint meetings will, it is hoped, be continued.

Two committee meetings were held during the year.

W. C. FORSTER, *Secretary*.

BOTANY

DURING the year the section has enrolled 19 new members. The membership thus shows an increase from 42 to 61.

Eleven outdoor meetings have been held during the year as announced on the syllabus. Four of these have been excursions to see rare and local plants in their special habitat. In each case the object was successfully achieved. The committee are not unmindful of the dangers attendant upon possible over-collecting of rare or local species, and this class of excursion will only be continued with considerable care and under strict supervision. At the same time it does seem to

arouse a good deal of interest. Of the other outings, three have been excursions of a more general character and the remainder have been visits to Kew Gardens, Syon House, and the Imperial Institute. In the case of Syon House, we are much indebted to the owner for permission to make the visit, and for much courteous assistance on the part of Mr. A. Bruce Jackson who acted as leader.

Three sectional meetings have been held at Winchester House besides the annual general meeting. The section also provided for the general meeting on January 18th, a most interesting and important lecture by Mr. Robert Paulson, F.R.S., F.R.M.S., President of the Essex Field Club, on "The Fungus Root Mycorrhiza," and for November a valuable lecture by Mr. A. B. Jackson, F.L.S., on "The British Elms."

The work of revising De Crespigny's "London Flora" has been continued during the year, but little progress has been made, owing partly to the wet season, and to the lack of helpers. Those interested should communicate with the chairman of the section, Mr. H. Spooner, who is personally supervising this work.

The collection of plant photographs foreshadowed in our report last year has been started and has made some progress, thanks to a generous donation by our chairman, who has presented the section with a remarkably fine series of photographs of British Orchids. More helpers are wanted, but the Committee gratefully acknowledge assistance received from Mr. J. E. S. Dallas, and have hopes of getting further assistance, both from him and others, in 1928.

During 1927 the following additions have been made to our records.

Northern portion of area: 3 species, viz., *Rosa stylosa*, Desc. (var. *systyla*, Baker; *R. tomentella*, Lem. (vars. *typica*, Chr. and *Carionii*, Desegl. and Gill.) and *Lastrea spinulosa*, Presl. The record in "London Naturalist" for 1926 of *Rosa tomentosa*, s.m., var. *eglandulosa*, W.-Dod, should read *R. omissa*, Desegl., var. *Sherardi* (Davis). *R. canina*, L., var. *stenocarpa* (Desegl.), has also been identified.

Southern portion: 10 species added, including aliens and casuals. The most noteworthy are *Spergularia salina*, Presl., var. *neglecta* (Syme), an almost eglandular form; \times *Rosa glabra* (Baker), (*canina* \times *spinosissima*) ; *R. Grovesii*, Baker; *R. omissa*, Desegl., var. *Sherardi* (Davies). *Salix alba*, L. \times *triandra*, L. (*undulata*, Ehrh.) ; and *Lilium Martagon*, L., also the following varieties of genus *Rosa* :—*R. spinosissima*, L., var. *Ripartii* (Desegl.) ; *R. stylosa*, Desv., var. *lanceolata* (Lindl.) ; *R. canina*, L., var. *Amansii* (Desegl.), and *R. omissa*, Desegl. var. *Sherardi* (Davies).

All the Roses in these lists have been submitted to Lt.-Col. A. H. Wolley-Dod and have been named by him.

The recorder has received fewer lists than usual this year, and he will be glad to have more assistance in this respect from all members. Actual localities should always be given, and in case of uncommon or critical species it is essential that reasonably complete specimens (not mere scraps) should be forwarded in quite fresh condition, if possible.

Herbarium specimens of fairly recent collection, may of course be submitted to the Recorder, and will be returned if desired.

For some time past serious consideration has been given to the advisability of publishing the records gradually accumulated by the Botanical Section. Difficulties, financial and otherwise, had to be surmounted, but a beginning has now been made.

The committee of the section has decided that the most satisfactory method of publication will be as a supplement to the "London Naturalist," year by year, with its own continuous pagination distinct from that of the main contents. Such method will facilitate the binding up, into a separate volume, of the whole records when finally completed. The length of the time which will elapse before completion must depend on the number of pages which the council is able to allot for the purpose, and, obviously, such allotment can only be determined by the amounts at their disposal from year to year. It will be seen at once that the problem is almost wholly one of finance, and that the period of completion can be shortened considerably if generous botanists will come forward and, without curtailing their existing contribution to general funds, provide additional financial help, specially earmarked for the publication of these records.

It is hoped that, as a result of publication, members will concentrate upon filling up gaps, especially as regards common species.

LAWRENCE J. TREMAYNE, *Secretary*.

ENTOMOLOGY

FOUR papers on entomological subjects were read to the Society, while at the exhibition Mr. Collenette gave a short account of his entomological trip to West Africa. Two papers were read to the section. On May 17th Mr. C. B. Smith dealt with "Swiss Butterflies," and on November 15th Mr. R. Marshman Wattson spoke on "British Dragonflies."

Four outings were carried through, the places visited being Clandon Downs, Chalfont, Limpsfield, and Royston, but the weather was never very favourable. This factor must be held responsible for the small number of specimens shown at the ordinary meetings. On November 15th Mr. C. H. Williams showed a fine series of *Spilosoma lubricipeda* var. *zatima*, and Mr. Riches examples of *Lycia* (*Biston*) *hirtaria* with strong melanic tendencies, and also undersized.

Mr. R. W. Robbins records *Hylophila bicolorana* and *H. quercana* (*prasinana*) from Epsom Common; *Epione adrenaria*, and *Xylina ornithopus* from Limpsfield Chart; *Acronycta leporina*, *Geometra papilionaria*, *Satyrus megaera*, *Cynthia cardui*, and *Colias crocens*, at Limpsfield, while near Limpsfield *Limenitis sibylla* and *Dryas paphia* were seen, the former in some numbers. This species was also reported from other localities in Surrey by other members, so it is to

be hoped that it will be allowed to establish itself once more in the woods near London.

On one of the Society's outings the larvae of *Stigmonota pallifrontana* were obtained in their food plant. This is believed to be the first record of this Tortrix for Surrey. Later investigation showed that the insect is well established at the spot, as out of 207 seed pods examined from three bushes of the food plant, *Astragalus glycyphyllos*, 117 were found to have been attacked by the larvae.

H. J. BURKILL.

ORNITHOLOGY

THE annual general meeting of the section was held on November 15th, 1927, when the following members were elected to form the committee for 1928 :—Chairman, J. E. S. Dallas ; General Secretary, H. A. Littlejohn ; Field Meetings Secretary, L. Parmenter ; Reading Circles Secretary, R. W. Pethen ; Bird " Ringing " Secretary, R. W. Hale ; Recorder, A. Brown ; members of committee, Messrs. Austin, Bayne and Poock and Miss Longfield. Mr. C. S. Bayne continues to represent the section on the Publicity Committee of the Royal Society for the Protection of Birds.

The section provided for the Society's syllabus the following papers which were read at general meetings :—April 5th, " Bird Portraiture " (with illustrations) by Roland Green, F.Z.S. ; December 20th, " Something about Birds' Songs and Notes " (with lantern illustrations) by Dr. Norman H. Joy, F.E.S., M.B.O.U.

SECTIONAL MEETINGS

Two sectional meetings were held at which the following papers were read :—February 15th, " The Little Owl," by R. W. Hale ; September 20th, " Field Notes by Members."

On December 10th, the members of the section visited the ornithological department of the British Museum of Natural History.

The field meetings are more than maintaining their popularity. No fewer than 55 members and 15 visitors attended at least one of the 13 whole-day and 5 half-day meetings held during the year. The average attendance at the whole-day field meetings was 14·9 and at the half-day meetings 13. 113 different species—including White-fronted Goose (*Anser albifrons*, Scop.), 2 of which were seen at the Kentish Marshes Field Meeting on November 27th—were identified at these field meetings with an average of 47·7 at the whole-day meetings.

The following districts were visited :—Virginia Water, Amersham, Essex Marshes, Hertfordshire Woodlands, Epping Forest (2 visits), Curtismill Green, Walthamstow Reservoirs, Richmond Park (2 visits), Wanstead Park (including the Heronry, through the courtesy of Mr. F. F. McKenzie), Ken Wood (including the private part, through the courtesy of the late Earl of Iveagh), Thames Marshes, Reading, Tring, Weston Turville, Kentish Marshes, and Broxbourne.

RINGING AND COLLECTIONS

Schedules relating to 490 birds of 40 different species were sent in under the "British Birds" marking scheme, the work being materially helped by our correspondents, the Misses S. A. E. and S. E. G. Harker, and Mr. C. S. Clarke.

Three birds have been reported as recovered, as follows:—(1) A Chaffinch ringed at Braughing, Herts, as a nestling, by R. W. Hale, on May 19th, 1926, was reported at Standon, Herts, in April 1927; (2) A Blackbird ringed at Enfield, Middlesex, as an adult, by S. G. Poock, on December 24th, 1925, was reported at Goyck, Brabant, Belgium, on October 25th, 1926; (3) A Wren ringed at Bishop's Stortford, Herts, as a nestling, by R. W. Hale, on July 15th, 1926, was reported where ringed on January 17th, 1927.

The photographic collection now numbers 166 sheets, 8 fresh sheets having been added during the year.

The section has provided a cabinet for the storage of its bird-skin collection, to which the following have been added during the year:—Black-headed Gulls (young), Jackdaw, Rook, Sedge Warbler.

36 new members have joined the section during the year, making the membership 98 as at December 31st, 1927, and representing an increase of more than 50% over the corresponding figure for 1926.

The thanks of the section are tendered to a number of correspondents who, as in past years, have furnished notes and records.

SYDNEY G. POOCK, *Secretary*.

(Owing to the resignation of Mr. S. G. Poock from the post of Secretary, the section is deprived of his services in that office. He has filled it for two years with conspicuous success and the section wishes to record its gratitude for his energetic work on its behalf. Mr. H. A. Littlejohn has consented to fill the vacancy created.

JOHN E. S. DALLAS, *Chairman*.)

NEW SPECIES

Four species of birds new to the Society's district have been recorded during 1927, making the total number 186. These occurrences were:—KNOT, *Calidris c. canutus* (Linnæus). September 10th, two in winter plumage at Staines Reservoirs (J. P. Hardiman) ("British Birds," Vol. XXI., p. 205). CURLEW-SANDPIPER, *Erolia testacea* (Pallas). September 7th, one in winter plumage at Staines Reservoirs; September 10th, one in winter plumage and another in partial summer plumage, both at Staines Reservoirs (J.P.H.), ("British Birds," Vol. XXI., p. 205). WOOD-SANDPIPER, *Tringa glareola*, L. August 17th, one, and on the 18th, two, observed on the mudflats of the drained Staines Reservoirs (R. W. Hayman, per J.P.H.). OYSTER-CATCHER, *Hæmatopus o. ostralegus*, L. August 30th, at Barn Elms Reservoirs (L. Parmenter), ("British Birds," Vol. XXI., p. 129).

INTERESTING RECORDS

Records of the more uncommon species observed during the current year are as follows;—

EPPING FOREST

BRITISH GOLDFINCH, *Carduelis c. britannica* (Hartert), January 2nd, several at Goldings Hill Ponds (L.P.). SISKIN, *Spinus spinus* (L.), February 5th, four at Highams Park (S. Austin). BRAMBLING, *Fringilla montifringilla* (L.), January 2nd, about a dozen at High Beach : and January 8th, about 12 near "Wake Arms" (S.A.) ; October 27th, three at High Beach (Miss A. Hibbert-Ware). BRITISH BULLFINCH, *Pyrrhula p. nesa* (Mathews and Iredale), January 2nd, one at Connaught Water, and a pair at Golders Hill Ponds (L.P.) ; May 7th, at Yardley Hill (Mrs. W. Boyd-Watt) ; October 27th, one on Sewardstone Road, and two others in same week in Gilwell Lane (Miss A. H.-W.) ; November 13th, flock of seven at High Beach (S.A.). BRITISH GOLD-crest, *Regulus r. anglorum* (Hartert), January 2nd, between Connaught Water and Fairmead (L.P.) ; October 23rd, six seen between Chingford Wood and High Beach (S.A.). GREAT GREY SHRIKE, *Lanius e. excubitor* (L.), March 16th and April 5th, at Fairmead (good views on both occasions) (P. D. Hayward, per S.A.). REDWING, *Turdus musicus* (L.), November 13th, plentiful between Chingford Wood and High Beach (S.A.). FIELDFARE, *Turdus pilaris*, November 15th, flock of fifty on Chingford Plain (S.A.). NIGHTJAR, *Caprimulgus e. europæus* (L.), June 16th, one was flushed by a dog near the "Wake Arms" ; on examination of the ground two eggs were found laid at the foot of a small dead oak (P. D. Hayward, per S.A.). LITTLE OWL, *Carine noctua mira* (Witherby), March 11th, Gilwell Lane, one flew off dropping pellet (Mrs. W.B.-W.). BUZZARD, *Buteo b. buteo* (L.), March 20th, one seen soaring very high above the Lodge at Gilwell Park (Miss A.H.-W.). HERON, *Ardea c. cinerea* (L.). The Forest Superintendent (Mr. F. M. McKenzie) reported in September that the nests in Wanstead Park showed a total of 56.

WALTHAMSTOW RESERVOIRS

HOODED CROW, *Corvus c. cornix* (L.), November 19th, one seen (Miss A.H.-W.). TREE-SPARROW, *Passer m. montanus* (L.), April 29th, five seen at Coppermill Lane (H. A. Littlejohn). GREY WAGTAIL, *Motacilla c. cinerea*, Tunstall, February 16th (Mrs. W.B.-W.). WHEATEAR, *Enanthe æ. enanthe* (L.), April 13th, one ♂ at Coppermill Lane (H.A.L.). TEAL, *Querquedula c. crecca* (L.), November 19th, pair seen (Miss A.H.-W.). WIGEON, *Mareca penelope* (L.), November 8th, one ♂ (J.P.H.). SMEW, *Mergellus albellus* (L.), January 14th, one white ♂ and four others (Mrs. W.B.-W.). COMMON SANDPIPER, *Tringa hypoleucos*, (L.), April 29th and August 6th (H.A.L.). CURLEW, *Numenius a. arquata* (L.), November 27th, heard calling and one seen flying from the "Racecourse" (R. W. Pethen). SOUTHERN GOLDEN PLOVER, *Pluvialis a. apricarius* (L.), February 16th (Mrs. W.B.-W.) ; February 22nd,

one seen at the Tottenham side (Miss A.H.-W.). RED-NECKED GREBE, *Podiceps g. griseigena* (Boddaert), November 27th, two seen on the "Racecourse" (R.W.P.). SLAVONIAN GREBE, *Podiceps auritus* (L.), April 2nd, good view of a pair at the Tottenham side (Miss A.H.-W.). BLACK-NECKED GREBE, *Podiceps n. nigricollis*, (C. L. Brehm), September 4th (immature) (Mrs. W.B.-W.). TURTLE-DOVE, *Streptopelia t. turtur* (L.), May 8th, seen in flight across Coppermill Lane (A. Brown).

GENERAL

CROSSBILL, *Loxia c. curvirosta*, (L.), July 25th, party of seven seen in grounds of South Norwood Club, two undoubtedly males (A. M. Swain, per J. E. S. Dallas); July 30th and 31st, two small flocks seen at Leatherhead, much more numerous from middle to end of August, but by middle of September became scarcer (W. H. Thompson, "British Birds," Vol. XXI., p. 176); August 6th, two observed at West Ealing (R. W. Hale). CORN-BUNTING, *Emberiza c. calaudra* (L.), June 12th, 26th, and August 4th, several heard singing at Woodford New Road (H.A.L.).

WOOD-LARK, *Lullula a. arborea* (L.), April 8th, March 5th and 20th, Richmond Park (C. Oldham, A. Holte-Macpherson, Mrs. W.B.-W.); during April, May and June, and October 2nd, Box Hill (J.E.S.D.). WHITE WAGTAIL, *Motacilla a. alba*, April 26th and May 3rd, Barn Elms Reservoirs (L.P.); April 23rd, Penn Ponds, Richmond Park, ♂ (R.W.H.). GREY WAGTAIL, *Motacilla c. cinerea*, Tunstall, January 1st, February 5th, and March 17th, Barn Elms Reservoirs: February 13th, Staines Reservoirs (L.P.); January 2nd, Victoria Park (Miss K. Taylor, per S.G.P.); September 18th and October 9th, Ken Wood (Mrs. W.B.-W.). ROCK-PIPET, *Anthus spinoletta petrosus* (Montagu), February 13th, Staines Res. (L.P.).

BLACK REDSTART, *Phoenicurus ochrurus gibraltariensis* (Gmelin), April 27th, September 16th, a ♂, and April 30th, May 16th, a ♀, were observed in the precincts of the Nat. Hist. Museum at South Kensington (A. H. Bishop, "British Birds," Vol. XXI., p. 129). GREENLAND WHEATEAR, *Oenanthe a. leucorhoa* (Gmelin), April 10th, near Highgate Ponds (Mrs. W. B.-W.).

HOBBY, *Falco s. subbuteo* (L.), September 7th, Staines Reservoirs, two seen (J.P.H., "British Birds," Vol. XXI., p. 205).

CORMORANT, *Phalacrocorax c. carbo* (L.), August 26th and September 30th, Littleton Reservoir (2), (J.P.H., "British Birds," Vol. XXI., p. 205).

TEAL, *Querquedula c. crecca* (L.). During January, February, and March, observed at Staines and Barn Elms Reservoirs (200 on Jan. 16th, Staines), (L.P.). WIGEON, *Mareca penelope* (L.). During Jan., Feb., & March, observed at Barn Elms and Staines Reservoirs, and at Ruislip (100 on January 16th, Staines) (L.P.); December 27th, Barn Elms Reservoir (A.H.M.). SHOVELER, *Spatula clypeata* (L.), February 13th and March 20th, Staines Reservoir (L.P.); June 8th and October 15th, same place (A.H.M.). PINTAIL, *Dafila a. acuta* (L.), January 15th,

22nd, and 29th, Penn Ponds, Richmond Park 1 ♂ (Miss H. Watkins); March 20th, Staines Reservoir, 1 ♂ (L.P.); October 23rd and November 12th, Staines Reservoir (1) (A.H.M.). POCHARD, *Nyroca f. ferina* (L.). During January, February, March, and April, at Barn Elms and Staines Reservoirs (greatest number 107) (L.P.); June 2nd, at Barn Elms (over 200), and 25th, parent bird with 6 newly hatched ducklings) (A.H.M.). GOLDEN-EYE, *Glancionetta c. clangula* (L.), January 15th-April 3rd, and October 15th-December 3rd, at Staines and Barn Elms Reservoirs (L.P., A.H.M., and J.P.H.). COMMON SCOTER, *Melanitta n. nigra* (L.), December 29th, one captured alive at Primrose Hill (D. Seth-Smith "British Birds," Vol. XXI., p. 236). GOOSANDER, *Mergus m. merganser* (L.), January 16th-April 3rd, Staines and Barn Elms Reservoirs and Penn Ponds (greatest number 4 ♂, 3 ♀) (L.P. and A.H.M.); November 19th-December 24th, at Barn Elms and Staines Reservoirs and Penn Ponds (greatest number 11) (A.H.M. and J.P.H.). SMEW, *Mergellus albellus* (L.), January 1st-February 13th, Barn Elms and Staines Reservoirs (greatest number 15) (L.P.); December 3rd-30th, at Barn Elms and Lonsdale Road Reservoirs (greatest number 15) (A.H.M., L.P., and J.P.H.).

DUNLIN, *Erolia a. alpina* (L.), March 20th, May 22nd, August 2nd (about 25); October 15th and 17th, Staines Reservoirs, and December 20th, Barnes Reservoir (L.P., A.H.M., and J.P.H.). GREENSHANK, *Tringa nebularia* (Gunnerus), September 7th and 16th, and October 10th and 17th, Staines Reservoirs (J.P.H., "British Birds," Vol. XXI., p. 205). GREEN SANDPIPER, *Tringa ochropus*, L., August 7th, 8th, and 11th, Staines Reservoirs (2) (R. W. Hayman, per J.P.H.); October 8th, 16th, and 17th, Staines Reservoir (J.P.H.). BLACK-TAILED GODWIT, *Limosa l. limosa* (L.), August 14th, Staines Reservoirs (D. Gunn, per A.H.M.). WHIMBREL, *Numenius p. phaeopus* (L.), August 2nd, Staines Reservoirs (A.H.M.).

GREATER BLACK-BACKED GULL, *Larus marinus* (L.), January 15th and 29th, Barn Elms and Lonsdale Road Reservoirs (A.H.-M. & L.P.) BRITISH LESSER BLACK-BACKED GULL, *Larus fuscus affinis* (Reinhardt), April 14th (3), May 31st (few), August 17th (25), August 28th (61), Barn Elms Res.; August 26th (35), Lonsdale Road Res.; August 26th (95), Barnes Bridge; September 24th and 27th (40-50), Barnes (A.H.-M., L.P. and J.P.H.). COMMON TERN, *Sterna h. hirundo* (L.), May 3rd, 14th and August 17th, Barn Elms Res.; May 7th, Littleton Res.; August 1st, Staines Res. (J.P.H. and L.P.) LITTLE TERN, *Sterna a. albifrons* (Pallas), September 19th, Molesey Res. (J.P.H., "British Birds," Vol. XXI., p. 205). BLACK TERN, *Chlidonias n. niger* (L.), May 7th, September 7th and 10th, Littleton Res. (J.P.H., "British Birds," Vol. XXI., p. 205). LEACH'S PETREL, *Oceanadroma l. leucorrhoa* (Vieillot), December 27th, one captured alive in a snow-drift but died two days later (D. Seth-Smith, "British Birds," Vol. XXI., p. 236).

GREAT CRESTED GREBE, *Podiceps c. cristatus* (L.), August 26th, Staines Reservoirs (N.), quite 150 (A.H.-M.). BLACK-NECKED GREBE,

Podiceps n. nigricollis (C. L. Brehm), September 7th, 10th, October 8th, 15th, 29th, and November 5th, Staines Res. (A.H.-M. and J.P.H., "British Birds," Vol. XXI., p. 205).

CORN CRAKE, *Crex crex* (L.), May 6th and June 6th, Chingford Reservoir (R.W.P. and E. Mann).

ARTHUR BROWN, *Recorder*.

PLANT-GALLS

FOUR outings were carried through, the places visited being Epsom Common, Limpsfield, Lessness Abbey Wood, and Wimbledon Common. The visit to Reigate Heath was abandoned owing to heavy rain.

A considerable number of specimens were recorded during the year, of which the more interesting are listed below.

Ranunculus bulbosus, L.—*Perrisia ranunculi*, Bremi. Fetcham Park.

Cerastium vulgatum, L.—*Perrisia cerastii*, Binnie. Mickleham.

Stellaria media, Vill.—Flower buds distorted by Cecidomyid larvae. Leatherhead.

S. graminea, L.—Flowers distorted by Cecidomyid larvae. Not the same species as the last. Walton Heath.

Tilia vulgaris, Hayne.—*Perrisia Thomasiana*, Kieff. Oxted.

Erodium cicutarium, L'Herit.—*Eriophyes* sp.

Acer Pseudo-platanus, L.—*Eriophyes* sp. The large nail gall recorded the last few years was again noticed on Putney Heath, and in a fresh locality at Leatherhead.

A. campestre, L.—"Diploside" Houard 4027. This gall was very abundant near Leatherhead, and along the top of the Downs to the west.

Medicago lupulina, L.—*Perrisia trifolii*, F. Low. Mickleham.

Hippocrepis comosa, L.—*Maccolabis hippocrepidis*, Kieff. Leaflets folded upwards into a slender pouch which contains a white larva. Found in some numbers along one bank near Dorking in the autumn.

Onobrychis viciaefolia, Scop.—*Perrisia onobrychidis*, Bremi. Bookham.

Vicia angustifolia, L.—Leaflets folded upwards into pods. Larvae orange in colour. ? *Perrisia viciicola*, Tavares. One plant galled near Hascombe.

Rubus idaeus, L.—Swellings on the stems, containing numbers of orange-pink larvae. The galls resembles those of *Lasioptera rubi*, but the larvae are different in colour. Lessness Abbey Wood.

Rosa dumetorum, Thuill.—*Rhodites rosae*, L. Oxted.

Galium uliginosum, L.—*Eriophyes galii*, Karp. Bookham Common.

Asperula cynanchica, L.—*Phyllocoptes minutus*, Nal. Epsom Common.

Achillea ptarmica, L.—*Eriophyes* sp. curling the margin of the leaves upwards into a tight roll. Found on Wimbledon Common the last three years. Now also recorded from Epping Forest.

Arctium majus, Bernh.—*Trypeta bardanae*, Schrank. Mickleham.

Centaurea scabiosa, L.—*Aulax rogenhoferi*, Wachtl. Bookham.

Gentiana amarella, L.—*Eriophyes kernerii*, Nal. A number of galled plants found along one bank near Dorking. A smaller colony found on the Downs further west.

Scrophularia aquatica, L.—Galls resembling those due to *Macrolabis scrophulariae*, Tavares, recorded by Mr. Tremayne from Berkshire, and also found near Mickleham. The larvae had gone in each case.

Thymus Serpyllum, L.—*Janetiella thymicola*, Kieff. Horsley.

Ulmus montana, Stokes.—*Eriophyes filiformis*, Nal. Leatherhead.

U. campestris, L.—(1) Eriophyid patches on the underside of the lamina of the leaves. Leatherhead. (2) *Eriophyes filiformis*, Nal. Leatherhead.

Betula pubescens, Ehrh.—*Eriophyes* sp. The large bud reported last year was again found on Wimbledon Common.

Salix alba, L.—*Cryptocampus medullarius*, Hartig. Recorded by Mr. Niblett. Surrey.

H. J. BURKILL, Hon. Sec. and Recorder.

RAMBLERS

THE membership of the section now stands at 35 as against 22 a year ago. Of the new members 9 joined the section on joining the Society, and, it is believed, were attracted to the Society mainly by means of the section.

Twelve rambles have been held during the year. Attendance has varied between 5 and 17, the average being 9.

A feature of the programme this year has been a week-end at Whitechurch, Hants, under the leadership of our most energetic member, Dr. Simpson. Eight members attended, though only 5 were able to be present for the whole time. The arrangements were carried out with all Dr. Simpson's well-known thoroughness and the outing was much enjoyed. This is the first week-end that the section has held, and must be pronounced a distinct success.

In addition the section provided a paper by Mr. E. Steinman, Secretary of the North London Rambling Club, at the sectional meeting held jointly with the Archaeologists on January 4th. The lecture which was much appreciated, was on Italy, with lantern illustrations. Mr. Steinman has since joined the Society and the section. In the second half of the year, the sectional meeting was held on November 15th, when our old friend and member, Mr. Lewis Eynon, contributed a paper entitled "Rambles on Dartmoor" with lantern illustrations.

This section is now well established as an integral part of the Society's activities. It claims to do most useful work in attracting new members, and stimulating an interest in nature amongst those who first of all perhaps are only conscious of a general love of the country.

The last modification of the section's regulations has been quite successful. Each leader is now entitled to select his own day of the month, as well as his own place and his own kind of fixture. In fact each leader is an autocrat in turn. So far very little use has been made of this in the way of novelties. The third Sunday in the month has been generally, though not invariably chosen. The only arrangement possessing any suggestion of novelty has perhaps been the week-end of Dr. Simpson. However, no doubt original ideas will present themselves to members in time, and meanwhile the section is running smoothly and well.

LAWRENCE J. TREMAYNE, *Secretary.*

CHINGFORD BRANCH

THE 1927 session of the Chingford Branch has been a successful one. Nineteen new Associates have been elected against 6 struck off owing to their leaving the neighbourhood and other causes. The highest attendance was 52 and the lowest 24, the average being 70 per cent. higher than in 1926.

At the indoor meetings the following lectures have been delivered: "The St. George Expedition to the Pacific," by C. L. Collenette, F.E.S., "Episodes of Wild Life in Essex," by Miss Hibbert-Ware, F.L.S., "Archaeological Rambles in the East," by the Rev. H. J. Gamble, M.A., "Among Austrian Mountains," by J. E. S. Dallas, "Notes on Epping Forest," by J. Ross, "Birds of the Camargue," by W. E. Glegg, F.Z.S., M.B.O.U., "A Naturalist's Pilgrimage in Provence," by Miss Muriel Main, and, in addition, an evening devoted to lantern slide exhibits with three short lectures, *viz.*, "Bird life," by Miss Hibbert-Ware, F.L.S., "Pond life," by Trevor J. S. Blake, and "Pompeii," by the Rev. H. J. Gamble, M.A.

Visits were made to Kew Gardens, the Zoo, and the Natural History Museum.

The best thanks of the Branch are due to Messrs. J. Ross and Bernard Ward for acting as lanternists.

E. SAMUELSON, *Local Secretary.*



A VISTA IN SELSDON WOOD

By kind permission of the Commons and Footpaths Preservation Society

BRITISH
MUSEUM
22 JUN 28
NATURAL
HISTORY.

PAPERS READ TO THE SOCIETY

Jan. 18th	Fungus Root Mycorrhiza	Robert Paulson, F.R.S., F.R.M.S.
Feb. 1st	Annual Exhibition	
	(1) Notes from the Diary of a Marsh Tit	Miss Hibbert Ware
	(2) Rambles in Egypt: Obe- lisks and Sun-Worshippers	Rev. H. J. Gamble
	(3) A Trip to French Guinea	C. L. Collenette
	(4) Bananas	H. Spooner
Mar. 1st	Tse-tse Flies and their Signifi- cance to Tropical Africa	Major E. E. Austen, D.S.O.
Apr. 5th	Bird Portraiture	Roland Green, F.Z.S.
Apr. 12th	Bacot Memorial Meeting	
	Butterfly Hunting in Central and Southern Europe	J. A. Simes, O.B.E., F.E.S.
May 3rd	The Lore of the Bee	F. Martin Duncan, F.R.P.S., F.R.M.S.
June 14th	Westminster Hall, Its History, Architectural Design and Preservation	Sir Frank Baines, C.V.O., C.B.E.
Oct. 4th	Birds, Animals and Insects of Northern India	T. H. L. Grosvenor, F.E.S.
Oct. 18th	What is a Flint Implement?	S. Hazzledene Warren, F.G.S., F.Z.S.
Nov. 1st	British Elms	A. B. Jackson
Dec. 6th	Annual General Meeting.	President's Address.
Dec. 20th	Something about Bird's Songs and Notes	Dr. Norman H. Joy, F.E.S., M.B.O.U.

LONDON NATURAL HISTORY SOCIETY

		GENERAL		ACCOUNT			
		£	s. d.			£	s. d.
1926				1927			
Nov. 17	By Balance ..	34	15 9	Nov. 21	Secretary's Postages and Stationery ..	7	4 11½
Dec. 31	Interest on deposit ..	..	14 9		Treasurer's Postages ..	..	17 10
1927					Syllabus Expenses ..	..	..
Feb. 8	Donations to Syllabus ..	2	13 6		Printing ..	..	..
28	Sale of Boxes (Cross Collection) ..	1	7 0		Rent ..	..	..
	Donation ..	..	10 0		Stamps for "L.N." ..	..	..
	Allowance on Bill Account ..	2	3		Dinner Expenses ..	..	..
	Subscriptions and Entrance Fees..	77	1 6		Gratuities ..	..	..
					Lantern Slide ..	..	..
					Binding ..	..	..
					Insurance ..	..	..
					Reading Lamp ..	..	..
					Grant to Botanical Section ..	..	..
					Botanical Section Expenses ..	..	..
					Plant Galls and Entomological Section Expenses, 1926 ..	..	..
					Postages, Exhibition and Publication Committees, 1926 ..	..	..
					Plant Galls and Entomological Section Expenses, 1927 ..	..	..
					Postages, Exhibition and Publication Committees, 1927 ..	..	..
					Ornithological Section Expenses ..	..	..
					Archaeological Section Expenses ..	..	..
					Chingford Expenses ..	..	..
					Subscriptions ..	..	..
					Balance ..	..	..
1927		£117	4 9				
Nov. 21	Balance ..	..	43 3 2			£117	4 9

LIST OF MEMBERS

It is particularly requested that Members will inform the Secretary as soon as possible of any change of address.

HONORARY PRESIDENT

THE RIGHT HON. VISCOUNT GREY OF FALLODON, K.G., P.C.

HONORARY VICE-PRESIDENTS

F. J. HANBURY, F.L.S., F.E.S.

L. B. PROUT, F.E.S.

HONORARY MEMBERS

- 1901 Grant, G. F. H., 3, Westbourne Street, Hyde Park, W.2. (Arch.)
1899 Massey, Herbert, M.S.O.U., F.E.S., Ivy Lea, Burnage, Didsbury, Manchester.
(Lep., Orn., Ool.)
1894 Burrows, Rev. C. R. N., F.E.S., The Vicarage, Mucking, Stanford-le-Hope,
Essex. (Lep.)
1927 LeSouef, A. S., C.M.Z.S., R.A.O.U., Taronga Zoological Park Trust, Sydney,
Australia.
1927 Wolstenholme, H., B.A., M.B.O.U., R.A.O.U., Wahroonga, Sydney, Australia.

MEMBERS

- 1892 Adkin, R., F.E.S., "Hodeslea," Meads, Eastbourne. (Lep.)
1925 Aldred, Miss B. A., 16, Boscastle Road, Dartmouth Park, N.W.5.
1927 Aldred, Miss K. V., 5, Ladbroke Court, Ladbroke Gardens, W.11. (Arch.,
Orn.)
1922 Aldred, Miss M., Flat 5, 21, Ladbroke Gardens, Notting Hill, W.11. (Orn.)
1925 Archbould, R. S., Forest Way, Loughton. (Orn.)
1924 Aris, A., 44, Oldfield Road, Hampton.
1915 Aris, E. A., F.Z.S., 9, Oak Avenue, Priory Road, Hornsey, N. 8. (Lep.)
1925 Ash, Edward C., M.R.A.C., F.R.M.S., c/o Midland Bank, Chelmsford, Essex.
(Pond Life, Spiders).
1892 Austin, S., 43, Darent Road, Stamford Hill, N. 16. (Orn., Arch.)
1927 Baily, Miss A. R., Cressex Lodge, Binfield, Berks. (Arch., Bot., Orn., Ent.,
Plant Galls, R.)
1927 Baird, The Hon., J. I., Flat 3, 40, Park Lane, W. (Orn.)
1924 *Baker, Edward C. S., J.P., O.B.E., F.Z.S., F.L.S., M.B.O.U., H.F.A.O.U., 6,
Harold Road, Upper Norwood, S.E. 19. (Orn.)
1927 Baldock, G. R., 467, Hertford Road, Enfield Highway. (Lep.)
1927 Barclay-Smith, Miss P., F.Z.S., M.B.O.U., Park Lodge, Hervey Road, Black-
heath, S.E.3. (Orn.)
1927 Barr, Mrs. Margaret, 16, Roland Gardens, S.W.7. (Orn.)
1903 *Battley, Mrs., 6, Craven Avenue, West Ealing, W. 13.
1915 Bayne, Charles S., 4, Museum Mansions, Gt. Russell Street, W.C.1. (Orn.)
1926 Benn, Miss A., 68, South Esk Road, Forest Gate, E.7. (Orn.)
1927 Best, Miss M. G. L., F.Z.S., M.B.O.U., 28, Paulton's Square, S.W.3. (Orn.)
1920 Biddiscombe, W., 125, Chertsey Road, Chertsey, Woking. (Bot.)
1928 Binning, Miss J. S., Eildon, Florence Road, Sanderstead, Surrey. (Orn.)
1896 Bishop, E. B., "Lindfield," Marshall Road, Godalming. (Bot., Arch., Plant
Galls., Orn.)

- 1926 Blackett, Miss F., 196, Cromwell Road, S.W.5.
 1928 Bladdon, Miss N., 193, Brondesbury Park, N.W.10. (Arch., R.)
 1926 Blezard, Miss R., F.Z.S., 89, Eaton Square, S.W.1. (Orn., Bot.)
 1921 Blount, W. S., L.R.I.B.A., Tregallas, Harefield Road, Uxbridge. (Arch.)
 1925 Boardman, Stuart, "Green Rigg," Friary Lane, Woodford Green, Essex (Orn.)
 1902 Braithwaite, J. O., 18, Warren Road, Chingford, E. 4. (Micr., Bot., Ent.)
 1910 Braithwaite, Miss N. A., 18, Warren Road, Chingford, E. 4
 1916 Brown, A., 44, Ravensdale Road, Stamford Hill, N. 16. (Orn., Arch., Geol., R.)
 1926 Browne, Miss Constance H., 219, Harlesden Road, Willesden, N.W.10 (R., Arch.)
 1927 Bullard, G. E. S., 253, West End Lane, West Hampstead. (Bot.)
 1915 Burkill, H. J., M.A., F.R.G.S., 3, Newman's Court, Cornhill, E.C.3. (Plant Galls, Lep., Bot., Geol., Orn., R.)
 1926 Burnet, Ian G. W., 89, Blenheim Gardens, N.W.2. (Orn.)
 1912 Capleton, A., Beaufort House, 37, Lansdowne Road, South Woodford. (Mam., Orn., R.)
 1926 Carr, Miss A. N., 7, Cambridge Road, Watford. (Orn. R.)
 1928 Caulfield, F. W., 21, Gloucester Walk, W.8.
 1911 Chapman, E., 219, Harlesden Road, N.W.10. (Arch., Geol., R.)
 1927 Child, Miss E., Ridley House, 113, Gower Street, W.C.1. (R.)
 1927 Clanchy, Mrs. B. N., Russell Mansions, 21, Coram Street, W.C.1. (R.)
 1927 Clanchy, D. H., Russell Mansions, 21, Coram Street, W.C.1. (R.)
 1910 Clark, J. W., "Hazeldene," 10, The Ridgeway, Chingford, E. 4. (Bot.)
 1927 Coates, Mrs. E. F. M., 5, King's Garth, London Road, Forest Hill, S.E.23. (Orn.)
 1927 Coates, J. B., 5, King's Garth, London Road, Forest Hill, S.E.23. (Orn.)
 1904 Cockayne, E. A., M.A., M.D., F.R.C.P., F.E.S., 116, Westbourne Terrace, W.2. (Lep., Biol.)
 1925 Cocksedge, W. C., 6, Aldersmead Road, Beckenham, Kent. (Orn., Arch.)
 1907 Collenette, C. L., F.E.S., Gothic Lodge, Woodford Green, Essex. (Ent. Orn.)
 1927 Cook, C. A., Whincroft, Ivy Lane, Woking. (Bot., Orn.)
 1900 Cooper, B., 103, Bethune Road, Stamford Hill, N. 16 (Lep., Bot.)
 1928 Crawford, B. H., B.Sc., 108, Quebec Road, Ilford. (Bot., Ent., Orn., Plant Galls)
 1928 Crawford, Mrs. M.H., 108, Quebec Road, Ilford. (Bot., Ent., Orn., Plant Galls)
 1927 Cross-Rose, F., 20, Woolstone Road, Catford, S.E. (Orn.)
 1928 Cunningham, Miss D. W. M., 50, Ladbroke Grove, W.11.
 1892 Cyriax, R. C., 23, Aberdare Gardens, West Hampstead, N.W. 6. (Arch., Aryan question, Indo-European languages.)
 1920 Dallas, J. E. S., 38, Richmond Road, Islington, N. 1. (Orn., Bot.)
 1925 Dallas, Mrs. Rosa F., 38, Richmond Road, Islington, N.1.
 1922 Davis, E. J., M.I.Mech E., Milestone, Church Hill, Loughton. (Orn.)
 1926 Deane, Miss M.B.H., 1, Cromwell Place, S.W.7. (Orn.)
 1910 Dell, F. G., 55, Russell Road, Buckhurst Hill, Essex. (Pond life, Micr., Orn.)
 1927 Dolman, L. H., Trinity School House, Blackheath Hill, S.E.10. (Arch.)
 1927 Druce, F., M.A., F.L.S., 7, Culford Gardens, S.W.3. (Bot.)
 1927 Dunkerley, Rev. C. L., Laleham Vicarage, Staines, Middlesex. (Arch., Orn.)
 1905 Edelsten, H. McD., F.E.S., "Hillside," Lindfield, Sussex. (Lep.)
 1928 Emberson, L. M., 49, Adela Avenue, West Barnes, New Malden, Surrey. (Orn.)
 1927 Emery, J. W., Windsor Lodge, 450, Upper Richmond Rd., S.W.15. (Orn.)
 1927 English, Miss F., 8, Dorville Rd., Ravenscourt Park, W.6. (Orn., Bot., Arch., R.)
 1927 Evans, E. B., 86, Emmanuel Road, Balham, S.W.12. (Orn.)
 1907 Eynon, Lewis, B.Sc., F.I.C., "Fernleigh," Hall Lane, Upminster, Essex. (Chem.)
 1925 Farish, Mrs., "Stapleton," 46, Culverley Road, Catford, S.E. 6.
 1926 Farthing, Miss M., Bedford House, 108, Baker St., W.1. (R., Arch.)

- 1927 Ford, H. E., 30, The Common, Upper Clapton, E.5. (Orn.)
- 1922 Forster, W. C., 40, Nevers Square, S.W.5. (Arch., R.)
- 1924 Foster, John B., B.A., "Aldwick," Holland Road, Sutton. (Orn.)
- 1928 Fox, G. J. B., 45, Stanwick Mansions, West Kensington, W.14.
- 1920 Gamble, Rev. H. J., M.A., 14, Frederica Road, Chingford, E.4. Arch, Conch.)
- 1927 Gardiner, Miss L., 14a, St. James Road, S.W.17. (Orn., Arch.)
- 1928 Gauntlett, H. L., F.Z.S., F.E.S., F.R.M.S., F.R.H.S., 37, Howard's Lane, Putney, S.W.15.
- 1910 Gaze, W. E., 10, The Avenue, Highams Park, Chingford, E. 4. (Lep., Bot., Chem.)
- 1909 Gerrard, V., 38, Campden Hill Court, Campden Hill Road, Kensington, W.8. (Lep.)
- 1927 Glauert, L., Killuspy, Chesham Bois, Bucks. (Orn.)
- 1910 Glegg, W. E., F.Z.S., M.B.O.U., The House, Albion Brewery, Whitechapel Road, E.1. (Orn.)
- 1921 Glegg, Mrs., The House, Albion Brewery, Whitechapel Road, E.1. (Orn.)
- 1927 Green, Roland, F.Z.S., Ruskin Studio, 7, New Court, Lincoln's Inn, W.C. (Orn.)
- 1899 *Greenwood, Prof. M., F.R.C.P., M.R.C.S., "Hillcrest," Church Hill, Loughton, Essex. (Arch., Biol.)
- 1920 Grinling, C. H., B.A., 71, Rectory Place, Woolwich, S.E.18. (Bot.)
- 1927 Hale, R. W., 27, Abercorn Place, N.W.8. (Orn.)
- 1927 Halton, K. E., Ezbah, Chesham Bois, Bucks. (Orn.)
- 1903 Hanbury, F. Capel, Westfield, Hoddesdon, Herts. (Lep.)
- 1906 Hanbury, Frederick J., F.L.S., F.E.S., Brockhurst, East Grinstead. (Bot., Lep.)
- 1897 *Hanson, P. J., "Buncroft," Village Road, Bush Hill Park, Enfield. (Orn. Arch.)
- 1927 Hardiman, Miss A., 1, Avenue Mansions, Park Avenue, N.W.2. (R.)
- 1921 Hardiman, J. P., C.B.E., B.A., 1, Avenue Mansions, Park Avenue, N.W.2. (Orn., R.)
- 1925 Hart, C., 73, Windsor Road, Forest Gate, E.7. (Orn., Bot.)
- 1927 Harvey, J. H., Dallinga, Lower Road, Great Bookham, Surrey. (Bot.)
- 1910 Heath, G. H., M.A., 7, St. Philip's Road, Surbiton, Surrey. (Lep.)
- 1926 Hibbert-Ware, Miss A., F.L.S., The White Cottage, Gillwell Lane, near Chingford. (Orn.)
- 1919 Horn, P. W., 10, Sheringham Gardens, Romford, Essex. (Orn., Aquaria.)
- 1905 Hornblower, A. B., 91, Queen's Road, Buckhurst Hill, Essex. (R., Arch., Orn.)
- 1910 Howard, D. Lloyd, J.P., F.I.C., F.C.S., Pettits Hall, Chigwell. (Chem.)
- 1927 Hussey, H. T., 416, High Road, Leyton, E.10. (Arch., Orn., R.)
- 1927 Jago, R. P., F.Z.S., Rookwood, Bridle Road, Eastcote. (Orn.)
- 1927 Jeffery, H. J., A.R.C.Sc., F.L.S., 45, Wilton Rd., Muswell Hill, N.10. (Bot.)
- 1926 Jehan, Kenneth C., 49, Bruce Grove, Tottenham, N.17. (Bot.)
- 1927 Johnson, A. E., 49, Clinton Road, Mile End, E.3.
- 1928 Joicey, J. J., F.L.S., F.Z.S., F.R.G.S., F.E.S., The Hill, Wormley, Surrey. (Lep.)
- 1925 Jones, Mrs. D. Llewellyn, 5, Russell Gardens, Golders Green, N.W.11. (R.)
- 1926 Jones, Jock L., 5, Russell Gardens, Golders Green, N.W.11. (R.)
- *Kaye, W. J., F.E.S., "Caracas," Ditton Hill, Surbiton, Surrey. (Lep.)
- 1928 Kingsbury, A. W. G., 6, Pembridge Square, W.2. (Orn.)
- 1925 Korner, Miss Theodora, 4, Gunterstone Road, West Kensington, W.14. (R.)
- 1927 Lane, J. H., 571/3, Commercial Road, E.1. (Chem.)
- 1922 Lemon, F. E., M.A., LL.B. (Cantab.), J.P., C.A., "Hillcrest," Redhill, Surrey. (Orn.)
- 1922 Lemon, Mrs. M. L., M.B.E., J.P., M.B.O.U., F.Z.S., "Hillcrest," Redhill, Surrey. (Orn.)

- 1919 Leyton Public Libraries, per the Librarian (Z. Moon, F.R.Hist.S.), Central Library, Leyton, E. 10.
- 1927 Lister, Miss G., 871, High Road, Leytonstone, E. 11. (Orn.)
- 1926 *Littlejohn, H.A., 93, Carlyle Road, Manor Heath, E. 12. (Orn.)
- 1915 Loney, Herbert, 354, Goswell Road, E.C. 1. (Lep., Bot., Geol., Orn., Plant Galls, Arch.)
- 1926 Longfield, Miss C.E., F.R.G.S., F.E.S., F.Z.S., 20, Pont Street, S.W. 1. (Orn., Ent.)
- 1919 Lowne, B. T., "Ravenscroft," 129, Bromley Road, Catford, S.E. 6. (Bot.)
- 1911 MacIntosh, Miss I. S., 69, Windmill Hill, Enfield. (Bot.)
- 1911 MacIntosh, Miss J. D., 69, Windmill Hill, Enfield.
- 1923 *Macpherson, A. Holte, F.Z.S., 21, Campden Hill Square, Kensington, W. 8. (Orn.)
- 1927 Main, Miss M., 55, Buckingham Rd., E. 18. (Ent., Orn.)
- 1923 Mann, Edward, 10, Frankland Road, South Chingford, E. 4. (Pond Life).
- 1926 Martin, Miss L., 21, Station Grove, Wembley, Middlesex. (Arch., Lep.)
- 1927 Mason, Miss J., Eynsham Hall, Witney, Oxon. (Orn.)
- 1927 McArthur, Mrs. I., 48, Grosvenor Road, S.W. (Orn., Bot., Arch.)
- 1927 Mellows, C., M.A., F.E.S., The College, Bishops Stortford. (Bot., Ent.)
- 1887 Mera, A. W., 5, Park Villas, High Road, Loughton, Essex. (Lep.)
- 1926 Mitchell, Miss E., 29, Aberdeen Road, Wealdstone, Middlesex. (Bot.)
- 1924 Moore, Miss A. E., 44, Carlton Avenue, Kenton, Middlesex. (Orn.)
- 1927 Moore, Miss F., Downshire House, Roehampton, S.W. 15.
- 1905 Moore, J. E., 6, Alwyne Villas, Canonbury, N. 1.
- 1927 Moss, Miss M. B., 21A, Muswell Avenue, Muswell Hill, N. 10. (Bot.)
- 1927 Mounsey, D. J., 5, Harewood Road, South Croydon. (Orn., Ent.)
- 1928 Murphy, Miss H., 43, Stafford Road, Bow, E. 3. (Bot., Orn.)
- 1926 Niblett, Montague, 10, Greenway, Wallington, Surrey. (Plant Galls.)
- 1893 *Nicholson, Miss B., "Rothbury," Langdon Road, Upper Parkstone, Dorset. (Bot.)
- 1925 Norman, Cecil, F.L.S., 55, Eccleston Square, S.W. 1. (Bot. Orn.)
- 1926 *Oldham, Charles, F.L.S., F.Z.S., M.B.O.U., The Bollin, Shrublands Road, Berkhamsted. (Bot., Orn., Conch.)
- 1924 Palmer, Miss Fanny, 8, Ulundi Road, Blackheath, S.E. 3. (Arch.)
- 1928 Palmer, R., F.E.S., F.Z.S., "Standeford," Baldock Road, Letchworth, Herts. (Ent., Orn., Plant Galls, Pond Life, R.)
- 1925 *Parmenter, L., 8, Titheborne Street, W. 2. (Orn.)
- 1921 Parsons, S. T. T., 10, Ashburn Gardens, S.W. 7. (Orn.)
- 1922 Patterson, Dr. R., F.L.S., M.R.I.A., 7, The Crest, Berrylands, Surbiton, Surrey.
- 1922 Payne, C. H., 13, Kidderpore Gardens, Hampstead, N.W. 3. (Orn. Arch.)
- 1923 Payne, E. M., 23, St. George's Avenue, Southall, Middlesex. (Bot.)
- 1901 Payne, H. T., 70, Castlewood Road, Stamford Hill, N. 16. (Lep.)
- 1923 Payne, L. G., 22, Marksbury Avenue, Richmond. (Bot.)
- 1922 Pethen, R. W., 108, Northwold Road, Upper Clapton, E. 5. (Orn. Ent.)
- 1927 Phillips, D. M., F.Z.S., 146, Bishopsgate, E.C. (Bot., Ent., Geol.)
- 1925 Pike, L. Elgar, 19, Caversham Avenue, Palmers Green, N. 13. (Rep. Ichth.)
- 1927 Piper, Miss G. E. M., 12, Elms Road, Clapham, S.W. 4. (Orn.)
- 1925 Poock, Sydney G., 17, Green Moor Link, Winchmore Hill, N. 21. (Orn.)
- 1910 Pratt, W. B., 10, Lion Gate Gardens, Richmond, Surrey. (Lep.)
- 1892 Prout, L. B., F.E.S., 84, Albert Road, Dalston, E. 8. (Lep., Biol.)
- 1927 Raikes, Miss D., 9, Launceston Place, W. 8. (Arch., Bot., Orn.)
- 1926 Rankin, The Hon. Lady, 48, Eaton Terrace, S.W. 1. (Orn.)
- 1925 Richardson, Arthur, Barrowell Green, Winchmore Hill, N. 21.
- 1891 Riches, J., 52, Calverley Grove, Hornsey Rise, N. 19. (Lep., Bot.)
- 1922 Robbins, J. C., F.E.S., "The Rosery," Limpsfield, Surrey. (Bot., Arch., Ent.)
- 1892 Robbins, R. W., "The Rosery," Limpsfield, Surrey. (Bot., Lep., Orn., Arch.)
- 1893 Robbins, Mrs., "The Rosery," Limpsfield, Surrey. (Bot., Arch., Orn.)
- 1924 Robertson, Lady Dorothy, 66, Park Street, W. (Orn.)

- 1910 *Ross, J., 18, Queens Grove Road, Chingford, E. 4. (Bot., Plant Galls, Orn.)
 1890 Routledge, G. B., F.E.S., Tarn Lodge, Headsnook, Carlisle. (Lep. Col. Hem.)
 1923 Sagar, H., Holly Hill Farm, Botany Bay, Enfield. (Orn., R.)
 1910 Samuelson, Edward, 2, Crown Buildings, The Green, Chingford, E.4. (Mam., Rep., R.)
 1901 Shaw, V. Eric, "Betula," Park View Road, New Eltham. (Hym. Lep. Micr., Api.)
 1927 Shoosmith, F. H., B.Sc., Ph.D., "Whitgift," Grange Road, Sutton, Surrey.
 1927 Simes, J. A., O.B.E., F.E.S., Kingsley Cottage, Queen's Road, Loughton. (Ent.)
 1911 Simpson, W., M.B., B.S., D.P.H., "The Ivies," 3, Adelaide Road, Andover, Hants. (Arch., Bot., Lep., Plant Galls.)
 1928 Smith, A. C., 18, Mornington Road, Woodford Green. (Ent.)
 1892 Smith, C. B., 61, Onslow Gardens, Muswell Hill, N. 10. (Lep.)
 1927 Smith, Miss G. L., 35, Maidenstone Hill, Greenwich, S.E.10. (Arch.)
 1926 Smith, Miss M. H., 17, Creswick Walk, Golders Green, N.W.11. (Orn., Bot.)
 1927 Solly, Miss B. N., 16, Sydney Street, S.W.3. (Orn.)
 1927 Southern, H. N., 67, Holden Road, N.12. (Orn.)
 1928 Sparkes, J., 23, Drayton Road, West Ealing, W.13.
 1928 Sparkes, Mrs. J., 23, Drayton Road, West Ealing, W.13.
 1922 Spooner, Herman, 21, Musgrave Crescent, Walham Green, S.W.6. (Orn., Bot., Arch., R.)
 1927 Stanley, S. F., Eversley, The Crossways, Gidea Park, Essex. (Arch., Orn.)
 1927 Statham, Miss M. E., 74, Warwick Street, S.W.1. (Orn.)
 1927 Steinmann, E., 152, Lordship Road, Stoke Newington, N.16. (R., Orn., Bot.)
 1920 *Stowell, H. S., I.R.I.B.A., 26, Queen's Gardens, Ealing, W.5. (Arch.)
 1927 Swain, A. M., 436, Blandford Road, Beckenham, Kent.
 1928 Talbot, G., F.E.S., "Mon plaisir," Wormley, Surrey. (Lep.)
 1927 Tarver, A., 7, Stuart Rd., Thornton Heath, Surrey. (Arch. Conch.)
 1926 Taylor, Mrs. K., The Vine House, Sevenoaks, Kent. (Orn.)
 1920 Thomas, Mrs. G. E., 9, Talbot Road, Isleworth, Middlesex. (Orn., R.)
 1927 Thresher, Miss G. A., 34, Henrietta Street, W.C.2. (Arch.)
 1892 Tremayne, L. J., Avenue House, Northumberland Avenue, W.C.2. (Bot., Lep., Arch., Plant Galls, Orn., R.)
 1908 Tremayne, Mrs., Avenue House, Northumberland Avenue, W.C.2. Orn., Arch., Bot. R.)
 1923 Trench, R. H., Hall Barn Cottage, Beaconsfield, Bucks. (Orn., R.)
 1925 Tucker, Leslie, F., "Danebury," The Chine, Grange Park, N. 21. (Lep.)
 1911 Van Lessen, R., B.Sc., 78, Wellington Road, Bush Hill Park, Middlesex. (Chem.)
 1927 Veitch, Miss A., 79, Shirley Gardens, Faircross, Barking, Essex. (Arch.)
 1927 Waller, G., 88, Beckenham Road, Beckenham, Kent. (Orn.)
 1925 Ward, Bernard T., 24, Long Deacon Road, Chingford, E.4. (Bot., R.)
 1920 Watkins, Miss H., 12, Connaught Avenue, East Sheen, S.W. 14. (Orn., R.)
 1927 Watkins, Miss M. A., 12, Connaught Avenue, East Sheen, S.W.14. (Arch.)
 1926 Watt, Hugh Boyd, 90, Parliament Hill Mansions, N.W. 5. (Orn. Ecology, Zoo., Bot.)
 1925 *Watt, Mrs. Winifred Boyd, 90, Parliament Hill Mansions, Lissenden Gardens, N.W. 5. (Orn.)
 1911 Wattson, R. Marshman, 32, St. Andrew's Road, Stoke Newington, N. 16. (Arch. Ent.)
 1928 Weeks, Claude, 7, Paynesfield Avenue, East Sheen, S.W.14.
 1927 Wharton, Miss D. C., xxth Century Club, 29, Stanley Gardens, W.11. (Bot. Ent. R.)
 1913 Wilde, Mrs. C. L., "Lindfield," Marshall Road, Godalming. (Arch., Bot. Galls)
 1922 Wilkinson, E. B., F.L.S., 7, Colville Square, W.11.
 1880 Williams, C. H., 5, Lower Belgrave Street, Eaton Square, S.W. 1. (Lep.)

- 1902 Willson, A. J., 46, Dover Road, South Wanstead, Essex. (Lep.)
 1928 Wilson, J., 115, Canterbury Road, Harrow. (Orn., Bot.)
 1927 Woolltortou, F.L.D., B.Sc., 9, Southbury Road, Enfield, Middlesex. (Arch.)
 1926 Wright, Max A., The Press Club, St. Brides House, Salisbury Square, E.C.4.
 (Orn., Bot.)

BRANCH ASSOCIATES

- 1927 Blake, Trevor, J. S., 9I, Station Road, Chingford, E.4. (Arch. Micr.)
 1927 Boothroyd, J. W., 27, Buxton Road, Chingford, E.4.
 1920 Chandler, J. H., J.P., 22, Scholars Road, Chingford, E.4.
 1927 Chappell, C. G., 31, Gordon Road, Chingford, E.4.
 1927 Chappell, Mrs. C. G., 31, Gordon Road, Chingford, E.4.
 1927 Chappell, Miss M., Summer Lawn, 37, Prospect Hill, Walthamstow, E.17.
 1925 Connoll, A., "Windyridge," Connaught Avenue, Chingford, E.4.
 1914 Connoll, Miss E., 47, Buxton Road, Chingford, E. 4.
 1910 Cox, Oswald F., "Croftdown," Shepherd's Hill, Highgate, N.6. (Bot.)
 1923 Dunn, Mrs. Edith M., 10, The Drive, Chingford, E.4.
 1922 Dupère, Miss Frances, 87, Station Road, Chingford, E.4.
 1928 Fidgeon, J. B., 151, Romford Road, Stratford, E.15. (Pond Life.)
 1920 Gain, Mrs. E. R., 49, Buxton Road, Chingford, E.4.
 1927 Gain, Miss M., 49, Buxton Road, Chingford, E.4.
 1926 Gamble, Mrs. H.M.A., 9, Park Hill Road, Chingford, E.4.
 1927 Gamble, Miss E., 9, Park Hill Road, Chingford, E.4.
 1926 Gamble, Miss Winifred, 9, Park Hill Road, Chingford, E.4.
 1920 Hart, Miss H., The Green Farm, Chingford, E.4.
 1923 Harvey, Cecil O., B.Sc., 4, Park Hill Road, Chingford, E.4. (Geol.)
 1927 Hayward, F. H., M.A., D.Litt., B.Sc., "Inglenook," Heathcote Grove,
 Chingford, E.4.
 1927 Holland, H., 27, Victoria Road, Chingford, E.4.
 1928 Jones, Miss A. M., 6, Crescent Road, Chingford, E.4.
 1926 Kay, Mrs. Beatrice, M.Sc., 7, Victoria Road, Chingford, E.4. (Bot.)
 1928 Langford, R. E., 10, Pretoria Road, Chingford, E.4.
 1925 Mancell, W. A., 4, Connaught Avenue, Chingford, E.4. (Orn.)
 1911 Mathieson, Miss M. L., 7, Crescent Road, Chingford, E. 4. (Meteorology.)
 1927 Pettit, Mrs. S., "Colham," 2, Victoria Road, Chingford, E.4.
 1927 Pettit, S., "Colham," 2, Victoria Road, Chingford, E.4.
 1920 Proctor, Mrs. E. M., 2, Woodland Road, Chingford, E. 4.
 1919 Puck, Alec, 12, The Ridgeway, Chingford, E. 4.
 1927 Read, Mrs. E. J., 33, Eglington Road, Chingford, E.4.
 1927 Read, Miss P., 33, Eglington Road, Chingford, E.4.
 1925 Saul, H., Barclay's Bank, Chingford, E. 4.
 1927 Sones, Mrs. F., "Home," King's Head Hill, Chingford, E.4.
 1903 Stevenson, H. E., F.C.S., 22, Wilton Grove, Wimbledon, S.W. 19. (Chem.)
 1927 Stopps, W. E., 6, Gordon Road, Chingford, E.4.
 1923 Trounce, J. P., J.P., "Woodside," Sewardstone Bury, Chingford, E.4.
 1923 Trounce, Mrs., "Woodside," Sewardstone Bury, Chingford, E.4.
 1927 Unwin, Mrs. E., 7, Mount View Road, Chingford, E.4.
 1922 Ward, Arthur H., "Mayfield," Kimberley Road, Chingford, E.4.
 1927 Wilkes, Miss L., 24, Woodland Road, Chingford, E.4.
 1922 Wright, W. A., "Ringstead," Old Church Road, Chingford, E.4. (Orn.)

COUNTRY AND SCHOOL ASSOCIATES

- 1924 Bailey, Mrs. Stephen, 45, Bridge Street, Godalming.
 1907 Bickham, Spencer H., Underdown, Ledbury. (Bot.)
 1908 Blake, W., 2, Acacia Villa, Ross, Herefordshire. (Orn., Conch.)
 1908 Bostock, E. D., Oulton Cross, Stone, Staffordshire. (Lep.)
 1924 Collins, Miss Florence, School of Gardening, Clapham, near Worthing, Sussex. (Orn.)
 1904 Cooke, Rev. P. H., M.A., Ickleton Vicarage, Great Chesterford, Essex. (Bot.)
 1892 Culpin, Millais, M.D., F.R.C.S., "Meads," Loughton, Essex. (Biol.)
 1926 Farthing, Miss E., Jesmond House, Bradford Road, Batley, Yorks. (Arch.)
 1904 Grubb, W. C., Belgravia, Barberton, Transvaal. (Geol.)
 1898 Hall, L. B., F.L.S., "Lingdene," King's Avenue, Parkstone, Dorset. (Bot., Galls, Biol., Geol., Micr.)
 1923 Hardiman-Nash, K. O., Nightsgift, Highwood, Ringwood, Hants. (Orn.)
 1923 Hardiman-Nash, Mrs. E. G., Nightsgift, Highwood, Ringwood, Hants. (Orn.)
 1927 Harvey, F. B., The Nook, Rhodes Minnis, Eltham, Kent.
 1915 Hopkins, Prof. F. G., M.A., M.D., F.R.C.P., F.R.S., 71, Grange Road, Cambridge (Biochemistry.)
 1902 Miller, Miss E., "The Croft," Rainsford Lane, Chelmsford. (Lep.)
 1905 Moore, J. W., Middleton Dene, Middleton Hall Road, King's Norton, Birmingham. (Lep.)
 1918 Pike, Oliver G., F.Z.S., M.B.O.U., The Bungalow, Leighton Buzzard.
 1914 Studd, E. F., M.A., B.C.L., F.E.S., Exeleigh, Starcross, Devon. (Lep.)
 1904 Ward, J. Davis, "Limehurst," Grange-over-Sands, Lancs. (Lep.)

NOTE.—The following abbreviations are used in the above lists:—Api., Apiculture; Arch., Archaeology; Ast., Astronomy; Biol., Biology; Bot., Botany; Chem., Chemistry; Col., Coleoptera; Conch., Conchology; Dipt., Diptera; Ent., Entomology; Ethn., Ethnology; Geol., Geology; Hem., Hemiptera; Hym., Hymenoptera; Ich., Ichthyology; Lep., Lepidoptera; Mam., Mammalogy; Micr., Microscopy; Neur., Neuroptera; Orn., Ornithology; Orth., Orthoptera; Ool., Oology; R., Ramblers Section; Rep., Reptilia; Zoo., Zoology. * Signifies a Life Member.

PLANT GALLS

IN ADDITION TO THOSE INCLUDED IN THE REPORT ON PAGE 42

Mr. L. B. Hall has recorded specimens from Hampshire and Dorset, including—

Thalictrum flavum, L. *Clinodiplosis thalictricola*, Rubs.

Lychnis dioica, Mill. *Contarinia steini*, Karsch.

Rhamnus catharticus, L. *Eriophyes amunlatus*, Nal.

Ulex Gallii, Planch. *Asphondylia ulicis*, Verrall. *Apion scutellare*, Kirby.

Lotus uliginosus, Schkuhr. *Contarinia loti*, De Geer.

Viburnum lantana, L. *Contarinia lonicearum*, F. Löw. *C. viburni*, Kieff.

Echinum vulgare, L. *Eriophyes echii*, Can.

Convolvulus arvensis, L. *Eriophyes convolvuli*, Nal.

Pedicularis sylvatica, L. *Phyllocopte pedicularis*, Nal.

Ulmus campestris, L. *Oligotrophus Lemeei*, Kieff.

BOTANICAL RECORDS OF THE LONDON AREA

**Being a List of Plants observed within 20 miles of
St. Paul's Cathedral**

*Compiled by the Botanical Section of the London Natural History
Society*

Edited by E. B. BISHOP, R. W. ROBBINS and H. SPOONER

PREVIOUS to the amalgamation with the City of London Entomological and Natural History Society in 1914, the recording area of the North London Natural History Society comprised only that section of the area north of the River Thames, whence compilation of records was begun in 1900, under the recordership of the late Mr. C. S. Nicholson. Following amalgamation, the corresponding section south of the river was scheduled, and compilation begun in 1914 by the present recorder, who, after the death of Mr. Nicholson, became responsible for the whole area.

AREA, SECTIONS AND DIVISIONS

The outer boundary of the area under examination is a circle of twenty miles radius from St. Paul's Cathedral.

Starting from the Thames N. of Egham, the circle passes through Fulmer, Chorley Wood, N. of St. Albans, Bengeo, Ware, High Ongar, Shenfield, Tilbury, Northfleet Pier, Ash, Kemsing Church, Crockham Hill, Earlswood Station, Great Bookham Church, Addlestone Church, Egham.

Although the numbers, names and boundaries of divisions have been published in the Transactions of the Society (1914, pp. 24-26; 1915, pp. 29 and 30), they are reprinted below for convenience of reference in this supplement. The outer boundary and the River Thames are omitted in describing boundaries of divisions.

NORTHERN SECTION (NORTH OF RIVER THAMES).

DIV.	NAME	BOUNDARIES	SOIL, ETC.
1.	Colnbrook	N., Oxford Road : E., River Colne	Alluvium, sands and gravels with woods.
2.	Rickmansworth	N.E., Dunstable Road : S.E., River Colne : S.W., Div. 1.	Similar to Div. 1. Chalk on valley slopes.
3.	Hounslow	N., Uxbridge Road : E., River Brent : W., Div. 1.	Valley gravels. Market gardens.
4.	Harrow	N., Road from Bushey to Barnet : E., River Brent : S., Div. 3 : W., Div. 2.	London Clay. Largely agricultural.

Div.	NAME	BOUNDARIES	SOIL, ETC.
5.	Mimms	E., Great North Road : S., Div. 4 : W., Div. 2.	Clay, gravel & chalk. Hilly & some woods.
6.	Hampstead	N., Road from Barnet to Enfield : E., New River : W., Divs. 3 & 4.	Includes inner London ; clay, gravels, & sand (Bagshot) at Hampstead.
7.	Enfield Chase	E., New River : S., Div. 6 : W., Div. 5.	Clay and gravels. Some large woods.
8.	Lea Valley	E., Road from Roydon to Waltham Abbey and Walthamstow, L.M.S. Rly. and River Roding : W., New River.	Alluvium and valley gravels.
9.	Epping	S.E., River Roding ; S. & W., Div. 8	London Clay, gravels on high ground, Epping Forest, &c.
10.	Hainault	N. & W., Div. 9 ; E., Road from Passingford Bridge to Romford ; S., L. & N.E.R. main line	Similar to 9
11.	Brentwood	S., Railway from Romford to Upminster & Laindon ; W., Divs. 9 and 10.	London Clay and Bagshot Sand. Woods and heath.
12.	Rainham	N., Divs. 10 and 11 ; W., River Roding.	Marsh land, alluvium, &c. Chalk, Purfleet to Grays.

SOUTHERN SECTION (SOUTH OF RIVER THAMES).

13.	Weybridge	E., Railway from Hampton Court to Junction, & thence by Claygate, &c., to boundary.	Bagshot Sand, with heaths. River gravels at Chertsey.
14.	Wimbledon	E., River Wandle ; S., Railway through Morden, Raynes Park to Kingston.	Higher river gravels of Putney and Wimbledon Commons & Richmond Park.
15.	Chessington	N., Div. 14 ; W., Div. 13 ; S. & E., Road from Gt. Bookham Church to Leatherhead Station, thence footpath and road direct to Ashted, Epsom, Ewell, Cheam, Sutton, Beddington and River Wandle.	London Clay and gravels. Commons and low-lying agricultural land.

DIV.	NAME	BOUNDARIES	SOIL, ETC.
16.	Norwood	W., River Wandle to Wad- don; S., main road through Croydon to Coombe Lane and Addington; E., County boundary.	Gravels and hills of London Clay. In- cludes inner South London.
17.	Banstead	W. & N., Divs. 15 and 16; E., road from Croydon to Merstham; S., Div. 19.	Chalk, with cappings of Thanet Sands and Woolwich Beds.
18.	Caterham	N., Div. 16; E., County boundary; W., Div. 17; S., Div. 19.	High chalk, with deep valleys. Cap- pings of sand.
19.	Holmesdale	N., Railway to Reigate, thence road to Merstham (Church), and roads and footpaths (Pilgrim's Way) to E. County boundary.	Valley of Gault Clay and the Greensand ridges.
20.	Blackheath	N., Railway from Green- wich through Woolwich to River Cray: W., County boundary: E., River Cray: S., Road from Addington to Hayes, Coney Hall, Kes- ton Church, thence road and footpath direct to Farn- borough, Orpington and River Cray.	Chiefly Blackheath Sands and Woolwich Beds. Much sandy common lands.
21.	Kent Marshes	S., Railway from Green- wich through Woolwich & Dartford to Northfleet.	Alluvium. Marsh lands. Chalk at Dartford.
22.	Darent	N., Div. 21: W., Div. 20: S., Sevenoaks road to near Halstead, then N.E., to River Darent up to and along the Chatham main line eastward.	Chalk, with cappings of Thanet Sand on which are large woods. Orchards.
23.	North Downs	N., Divs. 8 and 10: W., County boundary: S., "Pil- grims Way" road and path from Titsey to Kemsing.	High chalk land. Few villages & many small woods.
24.	Westerham	N., Div. 23: W., County boundary.	Gault & Greensand Similar to Div. 19.

In these pages, generally speaking, records previous to 1900 and 1914 respectively have been ignored. Most records have been furnished by members (past and present) of the London Natural History Society, and in such cases names and initials of finders are not given. Occasionally, however, records from current publications have been inserted, and in such cases authorities are given and the following abbreviations used:—J. of B.=Journal of Botany: B.E.C.=Botanical Exchange Club Report: W.B.E.C.=Watson Botanical Exchange Club Report: H.F.C.=Holmesdale Field Club: C.B.G.=Records given in a MS. Flora of Middlesex (in handwriting of the late C. B. Green), compiled by the Acton Natural History Society, from 1900 to 1910.

As regards certain critical species, identifications have been confirmed by well-known experts, who are mentioned under following abbreviations:—H.J.R.=Rev. H. J. Riddelsdell: C.E.S.=C. E. Salmon, F.L.S.: A.H.W.-D.=Lt.-Col. A. H. Wolley-Dod: J.F.=J. Fraser, F.L.S.: W.H.P.=W. H. Pearsall.

It must be admitted frankly that but little work has been done by members in many of the critical genera, consequently records in such groups are scanty and incomplete, and they may, when unconfirmed, be open to more or less doubt.

The usual difficulties have arisen as to the inclusion or otherwise of aliens and casuals, especially those which do not appear in the London Catalogue. Absolute consistency on this point is quite impossible. If recorders and compilers have erred, it has been on the side of inclusion.

Aliens not in the London Catalogue are marked †.

Arrangement, numeration and nomenclature are those of London Catalogue, Eleventh Edition, 1925.

English names are inserted only when in general use.

1. RANUNCULACEAE.

CLEMATIS, LINN. 1.

1. *C. Vitalba*, Linn. *Traveller's Joy*.

2. Denham.	Rickmansworth.	Croxley Mills.	Watford.	3.
Teddington.	Hampton.	Staines.	Sunbury.	Cowley.
4. Pinner.	Northwood.	Harefield.	5. Near Hatfield.	Potter's Bar.
South Mimms.	St. Albans.	6. Hanwell (C.B.G.)	7. Broxbourne.	
Great Amwell.	Essenden.	8. Near Broxbourne.	Roydon.	9.
Stapleford	Tawney.	Netteswell.	Yardley Hill.	Cobbins.
10. Hainault.	11. Brentwood.	12. Stifford.	Orsett.	Purfleet.
Hangman's Wood,	Grays.	17. Throughout the division.	18.	

Downs above Oxted (abundant). Woldingham. Selsdon. 19. Near Oxted (in lanes near chalk). 20. Near Bromley. Near Orpington. St. Paul's Cray to West Wickham. 21. Northfleet. 22. Knockholt Station. Hockenden. Swanscombe Park. Joyden's Wood. 23. Near Eynsford. Near Otford. Leaves Green to West Wickham. 24. Near Westerham.

THALICTRUM, LINN. 2.

7. **T. flavum**, Linn. *Common Meadow Rae.*

1. Staines (near Church). Wraysbury. Horton. Colnbrook. 2. N. of Uxbridge. Rickmansworth. 3. Shepperton. Chertsey Bridge. Harmondsworth. Yiewsley. 4. Northwood. Harefield (near chalk pit and the Moor). 8. In River Lea (near Cheshunt Marsh, Broxbourne and Ponder's End). 10. River Roding, near Ilford. 13. Weybridge. 14. Ham, by Teddington Lock.

ANEMONE, LINN. 3.

9. **A. nemorosa**, Linn. *Wind Flower.*

Freely in woods throughout most of the area, sometimes abundant. However, not yet recorded from 1, 2, 3, 8, 12, 13, 14, 16, 21. Probably overlooked in most of these, though uncommon in river valleys.

MYOSURUS, LINN. 5.

13. **M. minimus**, Linn. *Mouse-tail.*

13. Chertsey Mead (very local).

RANUNCULUS, LINN. 6.

The Batrachian Section of this genus (species 14 to 25), being decidedly critical, has not received due attention, and of the comparatively few records now published the naming of a considerable proportion cannot be regarded as free from doubt. Where special caution in this respect is needed attention has been drawn under particular species. These remarks are not intended as reflections upon past collectors, nor as any discouragement to future ones.

14. **R. circinatus**, Sibth.

3. Staines (ponds by railway and N. side of Moor). 4. Harefield. (All C.B.G.)

15. **R. fluitans**, Lam.

1. Staines Moor. Colnbrook. 3. R. Colne at Staines Moor and West Drayton. R. Cran at Isleworth. 8. Near Broxbourne. Dob's Weir.

(I suspect that some or all of these are *R. pseudo-fluitans*, Bak. and Fogg.—E.B.B.)

16. **R. trichophyllus**, Chaix.15. Great Bookham Common (*teste* W.H.P.).Var. *b. Drouetii* (F. Schultz).

3. West Drayton. Laleham Park. 6. Between Acton and Twyford. 7. New Barnet. 9. Between Walthamstow and Woodford. 19. Titsey. 22. Southfleet.

Var. *c. radians* (Revel) *f. Godronii* (Gren.).19. Limpsfield (*teste* W.H.P.).17. **R. heterophyllus**, Weber.

19. Limpsfield ("approaching var. *triphyllus* (Hiern)," W.H.P.).
20. Darrack Wood, Orpington. 21. Swanscombe Marshes ("Probably *R. heterophyllus* (Hiern)," W.H.P.).

18. **R. peltatus**, Schrank.

2. Bricket Wood. 3. Bushey Park. Cranford. 4. Whitechurch Common. Hendon. Ruislip Common. Stanmore Common. Harefield. Perivale. Northwood. 5. Barnet, Mimms, and Potter's Bar ("in every pond"). 6. Crouch End Fields. 7. Broxbourne. Near Essendon. 8. Clapton Marsh. Roydon. 10. Chigwell Row ("form approaching *f. truncatus* (Koch)," J. Groves). 12. Stifford. North Ockendon. Corbets Tey. 18. Worms Heath. 19. Limpsfield. Oxted.

Var. *floribundus* (Bab.).

19. E. of Limpsfield Common. 20. Hayes Common.

19. **R. pseudo-fluitans**, Bak. and Fogg.

4. R. Colne, near Rickmansworth.

20. **R. sphaerospermus**, Hiern.23. Near Brasted (*teste*, W.H.P.).25. **R. hederaceus**, Linn. *Ivy-leaved Water Crowfoot*.

3. West Drayton. 4. Totteridge Green. 7. Broxbourne.
9. Walthamstow. Chingford. Cook's Folly Wood. 13. Abrook.
Oxshott Heath. 14. Richmond Park. 18. Titsey. 20. Keston.
Chislehurst.

26. **R. sceleratus**, Linn. *Celery-leaved Crowfoot*.

Not really common, but recorded from every division except 16,
17, 18, 23, 24.

28. **R. Flammula**, Linn. *Lesser Spearwort*.

All divisions except 16, 17, 18, 21, 22, 23, 24. Probably overlooked in most of these, though rare or absent on the chalk.

31. **R. Lingua**, Linn. *Greater Spearwort*.

4. Totteridge (2 stations). 20. Locks Bottom. Bickley.

32. **R. auricomus**, Linn. *Goldilocks*.

All divisions except 13, 14, 15, 16, 20, 21, 22. Apparently less common S. of Thames.

33. **R. acris**, Linn. *Meadow Buttercup*.

Common. All divisions except 14.

34. **R. repens**, Linn. *Creeping Buttercup*.

Very common. All divisions.

35. **R. bulbosus**, Linn. *Bulbous Buttercup*.

All divisions except 13, 14, 15, 16.

37. **R. sardous**, Crantz. *Pale Hairy Crowfoot*.

5. Near St. Albans. 21. Near Northfleet.

39. **R. arvensis**, Linn. *Corn Crowfoot*.

1. Colnbrook. Near Iver. 2. Park Street. 4. Between Elstree and Harrow. South of Harefield. 5. North Mimms. 7. Rye House. Wormley. Essendon. 8. Roydon. 9. Hale End. Stapleford Tawney. Near Ongar Park Wood. 10. Hainault Forest. 11. Hare Street, Romford. 12. North Ockendon. 15. Near Chessington. Stoke D'Abernon. 17. Near Betchworth Station. 19. Limpsfield. 20. Eltham. 22. West of Eynsford.

41. **R. Ficaria**, Linn. *Lesser Celandine*.

Common. All divisions except 16, 21, 22. Probably overlooked in each of these.

CALTHA, LINN. 7.

42. **C. palustris**, Linn. *King Cup*.

All divisions except 17, 18, 21, 22.

HELLEBORUS, LINN. 9.

45. **H. [viridis]**, Linn.]. *Green Hellebore*.

Var. b. *Smithianus*, A. Braun.

7. Broxbourne. 18. Near Woldingham. South of Croydon. 23. Near Downe. East of Eynsford.

46. **H. foetidus**, Linn. *Stinking Hellebore*.

17. Near Mickleham.

AQUILEGIA, LINN. 11.

48. **A. vulgaris**, Linn. *Columbine*.

7. Wormley West End. 17. Near Walton Heath. 19. Limpsfield Chart (an escape). 20. West Wickham. 23. Near Shoreham.

DELPHINIUM, LINN. 12.

49. **D. Ajacis**, Reichb. *Larkspur*.

2. Rickmansworth (presumably an escape).

2. BERBERIDACEAE.

BERBERIS, LINN. 16.

54. **B. vulgaris**, Linn. *Barberry*.

6. Near Frith Grange, Finchley. 7. Goff's Oak. 8. By R. Thames, near Richmond. 17. Near Cherkley. 19. Near Reigate. 20. Paul's Cray Common. Bromley Common. Hayes Common.

Usually suggestive of having been planted.

55. **B. Aquifolium**, Pursh.

13. Cobham, towards Little Heath (presumably an escape).

3. NYMPHAEACEAE.

NUPHAR, SM. 18.

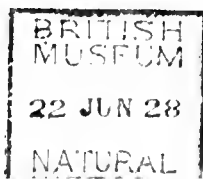
57. **N. lutea**, Sibth & Sm. *Yellow Water-lily*.

1. Black Park Lake. Colne Brook, near Horton. 3. Cranford. 3. In offsets of R. Colne, near Harefield and towards Denham Place. Swakeleys. 5. Park Street. 6. Hampstead Heath. 8. In R. Lea, at Dob's Weir, and near Broxbourne. Old River, Chingford. 9. Ongar. High Beach. R. Stort, near Eastwick. 13. By R. Wey, near Weybridge. 19. Oxted Mill. Godstone. 20. Eltham Palace Moat. Keston Pond. Kelsey Park.

NYMPHAEA, LINN. 19.

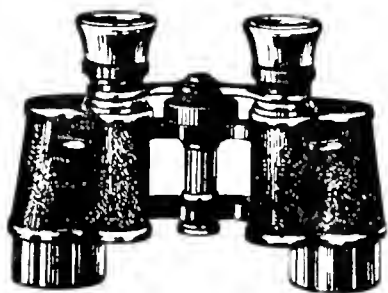
59. **N. Alba**, Linn *Water Lily*.

1. Black Park Lake. 3. West Drayton. 4. Totteridge



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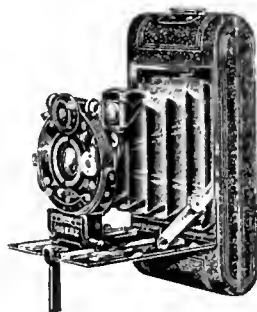


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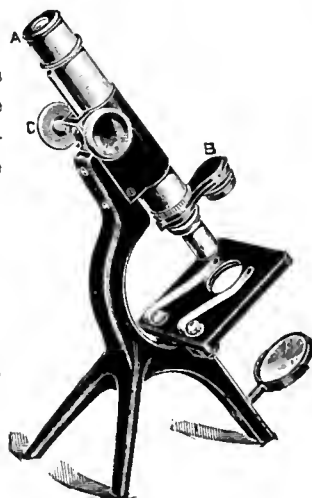
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